
**The Report of the
COMPILED 33rd ANNUAL ACTUARIAL VALUATIONS
Based Upon Data as of February 28, 2001
and
50 YEAR ACTUARIAL PROJECTIONS
Beginning February 28, 2001
for the
Participating Employers
of the
MISSOURI LOCAL GOVERNMENT
EMPLOYEES RETIREMENT SYSTEM**

**Submitted to
THE BOARD OF TRUSTEES
Missouri Local Government Employees Retirement System**

Gabriel, Roeder, Smith & Company

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October 22, 2001

The Board of Trustees
Missouri Local Government Employees Retirement System
Jefferson City, Missouri

Submitted in this report are the compiled results of the **33rd annual actuarial valuations and 50-year actuarial projections** for the Missouri Local Government Employees Retirement System, as amended through February 28, 2001.

The date of the valuations was February 28, 2001. The projections cover the 50-year period beginning February 28, 2001.

Actuarial valuations of individual participating employers are made for the purposes of (i) revising employer contribution rates and (ii) examining the reserve strength of each separately experience-rated group. These individual valuations are made annually for each employer who was participating as of the preceding December 31. Such valuations were made for **777 groups (463 employers)**.

Actuarial valuations are also made of retired life benefits being paid from the Benefit Reserve Fund to determine the financial condition of this pooled Fund.

The valuations were based upon data furnished us concerning members, retirees and beneficiaries.

The financial assumptions used in making the valuations are shown in the Appendix of this report. Assumptions concerning future experience are needed for computing employer contribution rates. As time passes and actual experience develops, assumed and actual experiences are compared. From time to time one or more of the assumptions about the future are changed by the Board after consulting with the actuary. The non-economic assumptions used in performing the 2001 valuations were adopted by the Board in conjunction with a six year experience investigation for the period ending February 29, 2000. The last major changes were in economic assumptions, and these were first used in the 2001 valuations.

Your attention is directed particularly to the COMMENTS on pages 2 and 3, and to the SHORT CONDITION TEST on page B-6.

Based upon the 2001 valuations it is our opinion that **LAGERS continues in sound condition in accordance with actuarial principles of level cost financing**. Overall financial condition is very strong.

Respectfully submitted,

Mita D. Drazilov, A.S.A Judith A. Kermans, E.A.

MDD:JAK:rmg

Comments on Valuation Results

Individual valuations of participating employers. There were 777 new employer contribution rates computed as of February 28, 2001. (Nineteen groups had no active employees and a dollar contribution was calculated for them. These nineteen groups are excluded from the totals on this page.) Of the 777 new rates, 605 were decreases from the previous rates, 75 were increases from the previous rates and 97 were unchanged. Further detail is shown in section G. A ten year comparative schedule follows:

Valuation Date	Decreases	Unchanged	Increases	Total
2-29-92	207	104	315	626
2-28-93	281	87	266	634
2-28-94	246	96	303	645
2-28-95	403	67	185	655
2-29-96*	133	32	500	665
2-28-97	356	89	241	686
2-28-98	409	97	205	711
2-28-99	382	117	232	731
2-29-00	570	71	106	747
2-28-01*	605	97	75	777

* Revised financial assumptions and/or funding method.

Decreases in employer contribution rates are seldom a problem. Increases can be a problem. This year the employer contribution rate for most plans decreased due to (1) investment return on an actuarial value of assets basis being greater than the assumed rate, (2) additional cost basis June 30, 2000 interest credits being allocated to the Employer Accumulation Fund due to the February 29, 2000 funded status of the Benefit Reserve Fund and (3) revised actuarial assumptions adopted by the Board as a result of the February 28, 1995 through February 29, 2000 experience study.

Retired life experience. Financial activities were restructured in 1986. Sufficient reserves continue to provide benefit increases at the 4% maximum average annual rate, subject to inflation caps. Page B-11 has detail.

Reserve Strength of Each Group Being Separately Experience-Rated

"Reserve strength" means the portion of accrued liabilities which are covered by accrued assets. The larger the portion, the greater the reserve strength. If liabilities become 100% covered by assets, the group is termed "fully funded."

At the time a local government joins LAGERS the reserve strength of that new employer is zero because there are no assets, while liabilities (for past service) have been generated.

Contributions to LAGERS are patterned so that reserve strength increases bit by bit, year by year.

However, this underlying pattern is being modified each year as actual financial experiences occur. Experiences more favorable than assumed cause reserve strength to increase more than planned, while less favorable experiences reduce reserve strength. Like snowflakes, no two groups have identical experiences.

In addition, reserve strength is lowered when a local government adopts a higher benefit formula (larger liabilities for past service are generated).

The hundreds of separately experience-rated groups within LAGERS have considerable differences in reserve strength. These differences are summarized on page B-8.

Financially, LAGERS consists of a large number of diverse groups, not a large number of clones of a single LAGERS average.

Section A

Financial Principles

Financial Principles and Operational Techniques of LAGERS

Promises Made, and To Be Paid For. As each year is completed, the system in effect hands an "IOU" to each member then acquiring a year of service credit -- the "IOU" says: "The Missouri Local Government Employees Retirement System owes you one year's worth of retirement benefits, payments in cash commencing when you qualify for retirement."

The related *key financial questions* are:

Which generation of taxpayers contributes the money to cover the IOU?

The present taxpayers, who receive the benefit of the member's present year of service?

Or the future taxpayers, who happen to be in Missouri at the time the IOU becomes a cash demand?

LAGERS intends that this year's taxpayers contribute the money to cover the IOUs being handed out this year. By following this principle, **the employer contribution rate will remain approximately level from generation to generation** -- our children and our grandchildren will contribute the same percents of pay we contribute now.

(There are systems which have a design for deferring contributions to future taxpayers lured by a lower contribution rate now and putting aside the fact that the contribution rate must relentlessly grow much greater over decades of time -- consume now, and let your children face your **financial pollution** after you've retired.)

An inevitable by-product of the level-cost design is the accumulation of reserve assets, for decades, and the income produced when the assets are invested. **Invested assets are a by-product and not the objective.** **Investment income** becomes in effect **the 3rd contributor** for benefits to employees, and is interlocked with the contribution amounts required from employees and employers.

Translated to actuarial terminology, this level-cost objective means that the contribution rates must total at least the following:

Normal Cost (the cost of members' service being rendered this year)

... plus ...

Interest on Unfunded Actuarial Accrued Liabilities (unfunded actuarial accrued liabilities are the difference between: liabilities for members' service already rendered; and the accrued assets of the governmental unit in the plan).

Computing Contributions To Support System Benefits. From a given schedule of benefits and from the employee data and asset data furnished him, the actuary determines the contribution rates to support the benefits, by means of ***an actuarial valuation and a funding method.***

An actuarial valuation has a number of ingredients such as: the rate of investment return which plan assets will earn; the rates of withdrawal of active members who leave covered employment before qualifying for any monthly benefit; the rates of mortality; the rates of disability; the rates of pay increases; and the assumed age or ages at actual retirement.

In making an actuarial valuation the system must assume what the above experience will be, for the next year and for decades in the future. Only the subsequent actual experience of the System can indicate the degree of accuracy of the assumptions.

Reconciling Differences Between Assumed Experience and Actual Experience. Once actual experience has occurred and been observed, it will not coincide exactly with assumed experience, regardless of the wisdom of the assumptions and regardless of the skill of the actuary and the calculations made. The future can be predicted with considerable but not complete precision, except that inflation seems to defy reliable prediction.

LAGERS copes with these continually changing differences by having ***annual actuarial valuations,*** separately for each participating employer group. Each annual actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is continually changing employer contribution rates.

The size of an annual change in employer rate is usually less than one percent of payroll (up or down), particularly for the larger groups, where happenings to one or two employees have little effect on the group's status.

To avoid causing employer budget problems, LAGERS provides a maximum annual increase of one percent of payroll for any one participating employer, but this limit is seldom needed. Beginning with the February 28, 1999 valuations, the maximum allowed annual decrease in an employer contribution rate is also one percent of payroll, unless it is clear that a larger decrease will likely be long term in nature.

The Actuarial Valuation Process

The *actuarial valuation* is the mathematical process by which the contribution rate is determined, and the flow of activity constituting the valuation may be summarized as follows:

- A. ***Covered people data***, furnished by plan administrator, including:
 - Retired lives now receiving benefits
 - Former employees with vested benefits not yet payable
 - Active employees

- B. + ***Asset data*** (cash & investments), furnished by plan administrator

- C. + ***Assumptions concerning future financial experiences in various risk areas***, which assumptions are established by the Board of Trustees after consulting with the actuary

- D. + ***The funding method*** for determining employer contributions (the long-term, planned pattern for employer contributions)

- E. + ***Mathematically combining the assumptions, the funding method, and the data***

- F. = Determination of:
 - Plan financial position***
 - and/or ***New Employer Contribution Rate***.

Section B

Valuation Results



CHANGE in Employer Contributions*
By Valuation Groups February 28, 2001

Group	Number of Active Members	Number of Valuation Groups with Indicated Change in Employer Contribution Rate						Totals
		Decreases			Unchanged 0.00%	Increases		
		Over 1.00%	0.51% to 1.00%	0.01% to 0.50%		0.01% to 0.50%	0.51% to 1.00%	
General:	1 - 9	64	27	24	24	12	23	174
	10 - 49	88	32	34	30	6	3	193
	50 & up	<u>80</u>	<u>15</u>	<u>4</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>101</u>
	Totals	232	74	62	55	19	26	468
Police:	1 - 9	38	16	19	17	9	15	114
	10 - 49	57	21	17	17	4	2	118
	50 & up	<u>18</u>	<u>1</u>	—	—	—	—	<u>19</u>
	Totals	113	38	36	34	13	17	251
Fire:	1 - 9	10	5	2	4			21
	10 - 49	22	2	3	4			31
	50 & up	<u>5</u>	<u>1</u>	—	—	—	—	<u>6</u>
	Totals	37	8	5	8	0	0	58
Totals		382	120	103	97	32	43	777

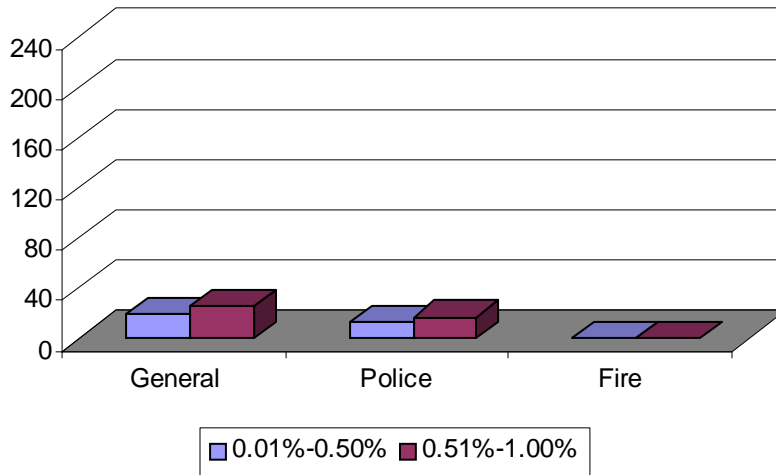
* Includes changes in employer contribution rates due to actual experience, changes in actuarial assumptions and changes in actuarial methods. It does not include changes in employer contribution rates due to benefit program changes.

In broad terms, the smaller the group, the greater the chance of a relatively large change in employer rate from one year to the next.

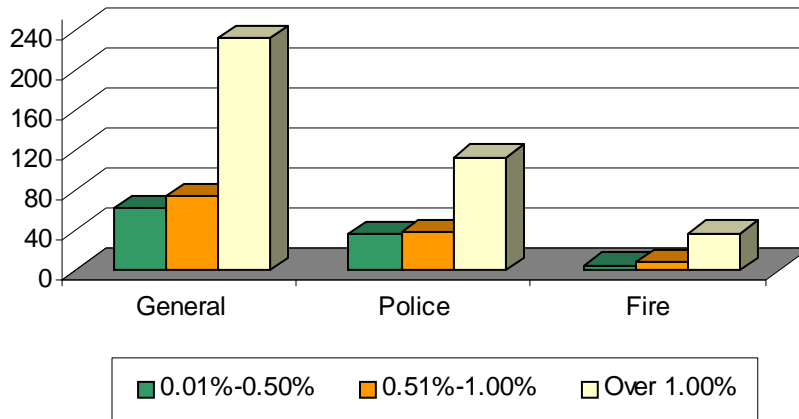
Missouri LAGERS

Change in Employer Contribution Rate* By Valuation Group

Increases



Decreases



* Includes changes in employer contribution rates due to actual experience, changes in actuarial assumptions and changes in actuarial methods. It does not include changes in employer contribution rates due to benefit program changes.

Schedule of Funding Progress

Each time a new employer joins the System, or an employer adopts a higher level of benefit, unfunded actuarial accrued liabilities are created. The law governing the System requires that these additional obligations be financed systematically over a period of future years.

In an inflationary economy the value of dollars is decreasing. This environment results in employee pays increasing in dollar amounts, retirement benefits increasing in dollar amounts, and then, unfunded actuarial accrued liabilities, all at a time when the actual substance of these items may be decreasing. Looking at just the dollar amounts of unfunded actuarial accrued liabilities can be misleading. Unfunded actuarial accrued liability dollars divided by active employee payroll provides an index which helps understanding. The smaller the ratio of unfunded liabilities to active member payroll, the stronger the System.

Schedule of Funding Progress

Valuation Date	(a) Actuarial Value of Assets	(b) Entry Age Actuarial Accrued Liability	(b-a) Unfunded Accrued Liability (UAL)	(a/b) Funded Ratio	(c) Annual Covered Payroll	[(b-a)/c] UAL as a % of Covered Payroll
02/29/92	\$ 797,212,641	\$ 862,168,310	\$ 64,955,669	92.5%	\$ 457,014,761	14.2%
02/28/93	881,054,064	952,080,014	71,025,950	92.5	472,928,628	15.0
02/28/94	959,742,611	1,059,355,076	99,612,465	90.6	505,208,639	19.7
02/28/95	1,058,988,617	1,184,478,577	125,489,960	89.4	534,173,422	23.5
02/29/96 #	1,193,364,071	1,321,045,041	127,680,970	90.3	581,120,176	22.0
02/28/97	1,356,624,078	1,520,483,332	163,859,254	89.2	627,184,823	26.1
02/28/98	1,592,940,530	1,719,428,702	126,488,172	92.6	667,085,761	19.0
02/28/99	1,818,112,722	1,940,840,958	122,728,236	93.7	716,154,828	17.1
02/29/00	2,129,073,917	2,153,498,866	24,424,949	98.9	757,753,142	3.2
02/28/01 #	2,395,912,598	2,302,816,630	(93,095,968)	104.0	808,959,105	-

Revised actuarial assumptions

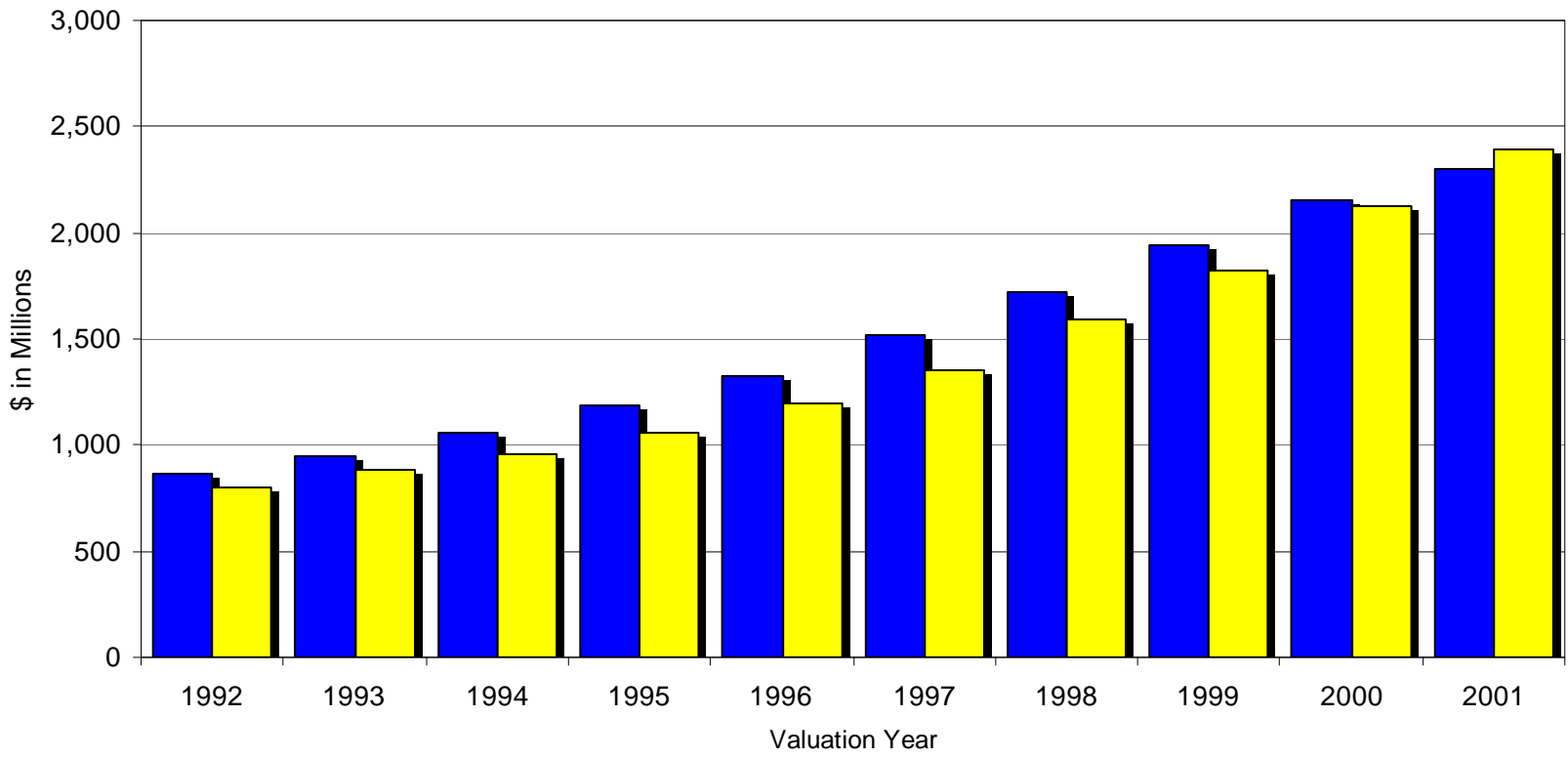
Each employer participating in the System is financially responsible for its own obligation. Accordingly, the aggregate numbers presented on this and the following pages are indicative only of the overall condition of the System and are not indicative of any one employer.

Factors that had a downward effect on the funded ratio this valuation year include:

- Employers adopting new benefit programs. For example, before reflecting the benefit changes adopted by political subdivisions during the year, the 2-29-00 and 2-28-01 Funded Ratios would have been 100.0% (instead of 98.9%) and 107.0% (instead of 104.0%), respectively.
- New employers joining LAGERS (who at time of joining do not have assets on hand to cover actuarial accrued liabilities associated with past service).
- The planned reduction in funding levels (through reduced employer contributions) for employers that are over 100% funded.

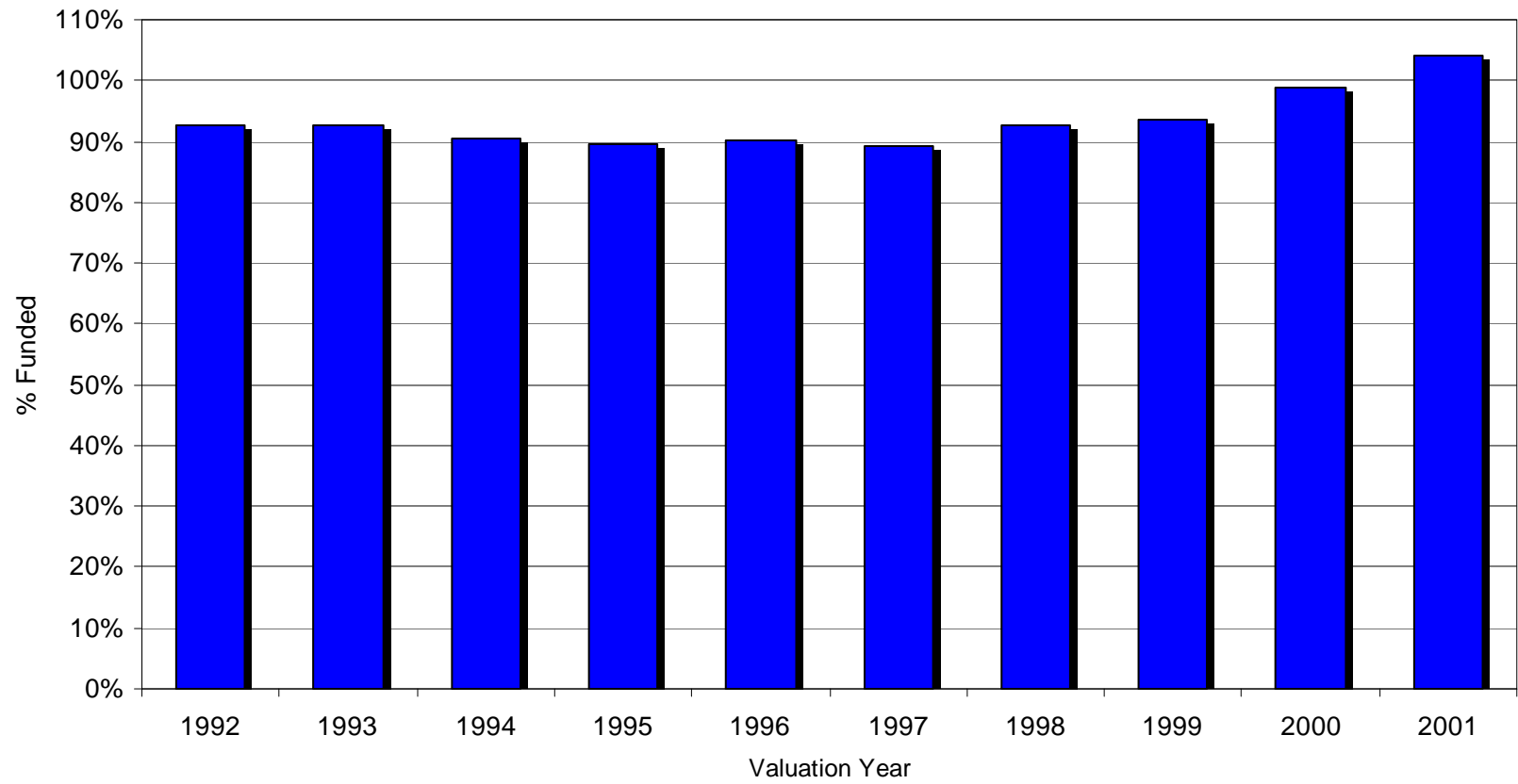
Factors that had an upward effect on the funded ratio this valuation year include scheduled employer contributions and favorable investment experience.

Missouri LAGERS
Portion of Actuarial Accrued Liabilities
Covered by Valuation Assets



■ Actuarial Accrued Liabilities ■ Valuation Assets

Missouri LAGERS
Valuation Assets as a Percent of
Actuarial Accrued Liabilities



Short Condition Test

The LAGERS funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will *pay all promised benefits when due -- the ultimate test of financial soundness*. Testing for level contribution rates is *the* long-term test.

A short condition test is one means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with the actuarial accrued liabilities for: (1) active member contributions on deposit; (2) future benefits to present retired lives; and (3) service already rendered by active members. In a system that has been following the discipline of level percent of payroll financing, the liabilities for active member contributions on deposit and for future benefits to present retired lives will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the system.

The schedule below illustrates the most recent 10 year history of the System's actuarial accrued liabilities and is indicative of the LAGERS policy of following the discipline of level percent of payroll financing.

Short Condition Test Comparative Schedule

Valuation Date	Entry Age Accrued Liability For			Actuarial Value of Assets	Portion of Accrued Liability Covered by Assets		
	(1) Active Member Contributions	(2) Retirants and Beneficiaries*	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
	02/29/92	\$ 89,814,406	\$ 266,482,976		\$ 505,870,928	\$ 797,212,641	100%
02/28/93	88,573,295	304,070,487	559,436,232	881,054,064	100	100	87
02/28/94	61,796,221	346,699,587	650,859,268	959,742,611	100	100	85
02/28/95	56,428,223	406,765,030	721,285,324	1,058,988,617	100	100	83
02/29/96 #	49,176,361	471,335,903	800,532,777	1,193,364,071	100	100	84
02/28/97	47,811,978	550,904,104	921,767,250	1,356,624,078	100	100	82
02/28/98	54,045,521	650,291,340	1,015,091,841	1,592,940,530	100	100	88
02/28/99	55,329,128	756,345,932	1,129,165,898	1,818,112,722	100	100	89
02/29/00	57,118,191	867,281,953	1,229,098,722	2,129,073,917	100	100	98
02/28/01 #	59,548,771	916,644,950	1,326,622,909	2,395,912,598	100	100	107

Revised actuarial assumptions.

* Includes reserve for future benefit increases.

Employers Accumulation Fund

The Employers Accumulation Fund assets totaled \$1,412,925,554 as of February 28, 2001 based on the actuarial value of assets. The individual participating Employers Accumulation Fund accrued liabilities (entry age actuarial cost method) were computed to be \$1,319,829,586 as of that date.

Each time a new employer joins the System, or an employer adopts a higher level of benefit, unfunded accrued liabilities are created. The law governing the System requires that these additional EAF liabilities be financed systematically over a period of future years.

Each employer is financially responsible for its own EAF liabilities. Accordingly, the aggregate numbers presented for the Employers Accumulation Fund are indicative only of overall condition and not indicative of the status of any individual employer.

Employers Accumulation Fund Aggregate Accrued Liabilities and Actuarial Value of Assets Comparative Statement

Valuation Date	Actuarial Value of Assets	Aggregate Accrued Liabilities	Ratio of Assets to Liabilities*
2-29-92	\$ 430,725,825	\$ 495,681,494	86.9%
2-28-93	478,502,447	549,528,397	87.1
2-28-94	542,150,265	641,762,730	84.5
2-28-95	588,531,939	714,021,899	82.4
2-29-96#	668,023,673	795,704,643	84.0
2-28-97	756,144,924	920,004,178	82.2
2-28-98	882,637,910	1,009,126,082	87.5
2-28-99	1,000,606,196	1,123,334,432	89.1
2-29-00	1,198,046,097	1,222,471,046	98.0
2-28-01#	1,412,925,554	1,319,829,586	107.1

Revised actuarial assumptions.

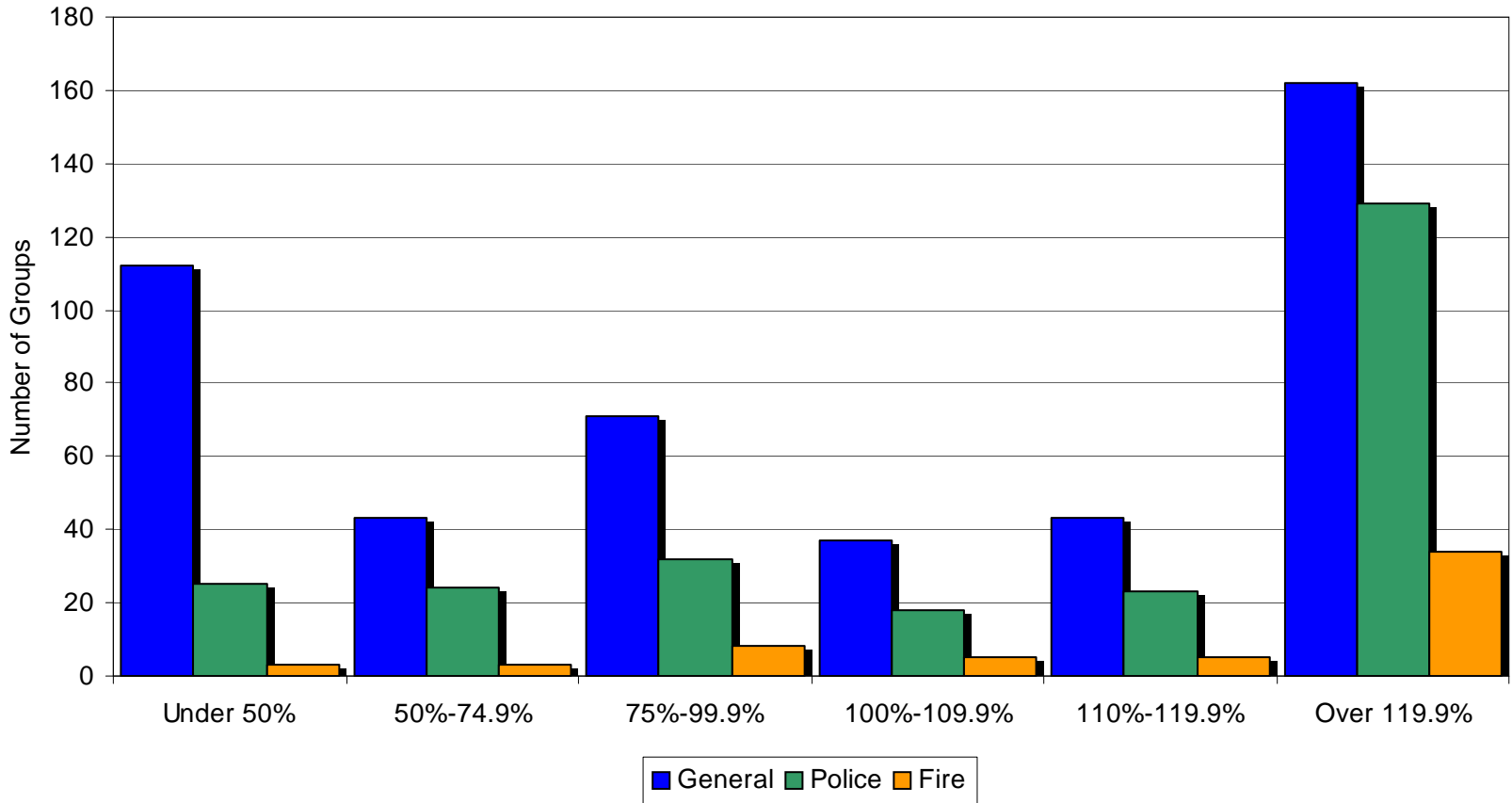
* The larger the ratio of assets to liabilities, the greater the reserve strength of the Employers Accumulation Fund.

Employers Accumulation Fund
PORTION of LIABILITIES covered by ASSETS
By Valuation Groups February 28, 2001

Group	Number of Active Members	Number of Valuation Groups with Assets as a Percent of Actuarial Accrued Liabilities						
		Under 50.0%	50.0% - 74.9%	75.0% - 99.9%	100.0% - 109.9%	110.0% - 119.9%	Over 119.9%	Totals*
General:	1 - 9	78	14	19	7	9	47	174
	10 - 49	32	22	31	16	19	73	193
	50 & up	<u>2</u>	<u>7</u>	<u>21</u>	<u>14</u>	<u>15</u>	<u>42</u>	<u>101</u>
	Totals	112	43	71	37	43	162	468
Police:	1 - 9	20	14	8	5	7	60	114
	10 - 49	5	10	14	12	13	64	118
	50 & up	—	—	<u>10</u>	<u>1</u>	<u>3</u>	<u>5</u>	<u>19</u>
	Totals	25	24	32	18	23	129	251
Fire:	1 - 9	2	2	4	1	1	11	21
	10 - 49		1	4	3	3	20	31
	50 & up	<u>1</u>	—	—	<u>1</u>	<u>1</u>	<u>3</u>	<u>6</u>
	Totals	3	3	8	5	5	34	58
Totals*		140	70	111	60	71	325	777

* Not included in this tabulation are 19 groups which presently have no active members.

**Missouri LAGERS
Employers Accumulation Fund
Portion of Liabilities Covered by Assets**



Members Deposit Fund

The Members Deposit Fund assets for active members totaled \$59,548,771 as of February 28, 2001.

The Members Deposit Fund actuarial accrued liabilities are a matching amount.

Members Deposit Fund Aggregate Actuarial Accrued Liabilities and Actuarial Value of Assets Comparative Statement

Valuation Date	Actuarial Value of Assets	Aggregate Accrued Liabilities	Ratio of Assets to Liabilities
2-29-92	\$ 94,400,009	\$ 94,400,009	100.0%
2-28-93	93,518,479	93,518,479	100.0
2-28-94	66,788,290	66,788,290	100.0
2-28-95	61,816,396	61,816,396	100.0
2-29-96	54,718,684	54,718,684	100.0
2-28-97	53,931,368	53,931,368	100.0
2-28-98	54,045,521	54,045,521	100.0
2-28-99	55,329,128	55,329,128	100.0
2-29-00	57,118,191	57,118,191	100.0
2-28-01	59,548,771	59,548,771	100.0

Benefit Reserve Fund

The Benefit Reserve Fund assets as of February 28, 2001 totaled \$916,644,950 based on the actuarial value of assets. The present value of future benefits was computed to be \$636,824,117 as of that date.

When a member retires, there is transferred to the Benefit Reserve Fund a single sum reserve which will cover all future pension benefits; this reserve is calculated based on assumptions about mortality and an assumed annual investment return rate of 4%.

Beginning in 1986, each year LAGERS actual investment return rate is credited to the Benefit Reserve Fund. The excess, if any, of the actual investment return rate over the assumed 4% provides the money from which the Board can grant benefit increases after retirement. Beginning in 1999 the investment return credit is limited if the funded ratio exceeds 140%.

The most recent such benefit increase occurred October 1, 2000 and consisted of an overall increase of 4% or less.

Benefit Reserve Fund Actuarial Accrued Liabilities and Accrued Assets Comparative Statement

Annual Valuation Date	Pensions Being Paid	Benefit Increase % Last Oct. 1	Investment Return % Last June 30	Present Value of Future Benefits	Reserve for Future Experience	Accrued Liabilities	Actuarial Value of Assets	Ratio of Actuarial Value of Assets to PVFB
02/29/92 #	\$19,573,710	4.0%	7.0%	\$218,846,616	\$47,636,360	\$266,482,976	\$266,482,976	121.8%
02/28/93	22,150,640	4.0	8.1	247,016,244	57,054,243	304,070,487	304,070,487	123.1
02/28/94	24,720,941	4.0	11.7	275,335,176	71,364,411	346,699,587	346,699,587	125.9
02/28/95	28,599,681	4.0 @	8.5	320,595,384	86,169,646	406,765,030	406,765,030	126.9
02/29/96	32,341,869	4.0	7.0	361,100,952	110,234,951	471,335,903	471,335,903	130.5
02/28/97	36,759,417	4.0	13.5	410,670,528	140,233,576	550,904,104	550,904,104	134.1
02/28/98	41,599,468	4.0	11.4	467,563,884	182,727,456	650,291,340	650,291,340	139.1
02/28/99	46,365,846	4.0	17.0	520,260,156	236,085,776	756,345,932	756,345,932	145.4
02/29/00	51,921,290	4.0	5.6	583,429,164	283,852,789	867,281,953	867,281,953	148.7
02/28/01 #	57,989,017	4.0 @	14.4	636,824,117	279,820,833	916,644,950	916,644,950	143.9

Revised actuarial assumptions.

@ The overall benefit increase % was 4.0% even though individuals received varying benefit increase %'s.

Casualty Reserve Fund

Beginning with the 1989 valuation, at the time a disability benefit becomes payable there is transferred from the Casualty Reserve Fund to the Benefit Reserve Fund the difference between (i) the full employer reserve covering the disability benefit and (ii) the accrued service liability of the Employer Accumulation Fund for the member who became disabled.

Employer contributions to cover the transfers described above are determined on a pooled-group basis (not separately for each financing group). The contribution rates, varying by size of benefit formula, were last changed in 1996.

If there is a positive balance in the Casualty Reserve Fund at any time, it indicates that cumulative past contributions have fully funded the cumulative past obligations --- similarly, a negative balance would indicate that cumulative past contributions have fallen short of the target.

For actuarial valuation purposes, actuarial accrued liabilities equal the actuarial value of assets.

Casualty Reserve Fund Actuarial Value of Assets at Valuation Dates Comparative Statement

Valuation Date	Employer L-1 Contributions: Year Ended	Actuarial Value of Assets	Accrued Liabilities	Assets Expressed as Percents of Member Payroll	
				Total	Change
02/29/92	0.2%	\$ 5,603,831	\$ 5,603,831	1.2%	%
02/28/93	0.2	4,962,651	4,962,651	1.0	-0.2
02/28/94	0.2	4,104,469	4,104,469	0.8	-0.2
02/28/95	0.2	1,875,252	1,875,252	0.4	-0.4
02/29/96	0.5	(714,189)	(714,189)	-0.1	-0.5
02/28/97	0.5	(4,356,318)	(4,356,318)	-0.7	-0.6
02/28/98 @	0.5	5,965,759	5,965,759	0.9	1.6
02/28/99	0.5	5,831,466	5,831,466	0.8	-0.1
02/29/00	0.5	6,627,676	6,627,676	0.9	0.1
02/28/01	0.5	6,793,323	6,793,323	0.8	-0.1

@ Reflects special \$10 million transfer to the Casualty Reserve Fund.

Section C
Projection Results

Introduction: The Nature of Actuarial Projections

Regular actuarial valuations measure the retirement system's present financial position and contribution adequacy by calculating and financing the liabilities created by the benefit program. This process involves discounting to present values the future benefit payments on behalf of present active and retired members and their survivors. However, valuations do not produce information regarding future changes in the makeup of the covered group or the amounts of benefits to be paid or investment return to be received. This is done by actuarial projections.

Whereas valuations provide a snapshot of the retirement system as of a given date, projections provide a moving picture. Projected active and retired groups are developed from year to year by the application of assumptions regarding pre-retirement withdrawal from service, retirements, deaths, disabilities, and the addition of new members. Projected information regarding the retired life group leads to assumed future benefit payout. Combining future benefit payments with expected contributions and investment earnings produces the net cash flow of the system each year, and thus end of year asset levels.

Projection results are useful in demonstrating changing relationships among key elements affecting system financial activity. For example: how benefits and system assets will grow in future decades. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. For instance, cash flow projected to occur 10 years in the future will not be exact (except by coincidence). However, projections can increase the understanding of the emerging and changing relationships between future benefit payout and future investment income.

This section presents the results of a 50 year open group actuarial projection of LAGERS' experience based on regular actuarial assumptions and February 28, 2001 census data. Each department (general, police, fire, etc.) of each employer is separately projected, based on the benefit provisions and actuarial assumptions applicable to that department. The results have been summarized over the 777 departments and presented in this report.

Summary Observations

The actuarial projections of LAGERS are based on regular valuation assumptions and lead to some general observations:

- 1) The ratio of active members to retirees will decline gradually over the next 50 years from the present level of 2.9 to 1 to a low point of 0.7 to 1 (see page C-12). The decline in the active/retiree ratio may be postponed if the active member population grows, either due to new employers joining LAGERS or an increase in the existing employers' work forces. The ultimate active/retiree ratio may be greater than 0.7 to 1 if the new lump sum cash out feature for short service vested members becomes much more popular.
- 2) The growth of the trust fund is expected to continue indefinitely, because of the projected 4% inflation. In real terms, assets will rise by about 63% over the present level, and remain approximately constant thereafter.
- 3) Investment return is now and will continue to be the largest source of revenue for the retirement system (see page C-14 or C-18).
- 4) In the next few years LAGERS' benefit payout will become larger than the employer and member contributions (see page C-16). The system will begin to rely in part on investment return to pay benefits. This is the normal and expected situation. At this point the system begins to reap the rewards of actuarial pre- or advance funding. In fact, in about 17 years investment income will pay more of the benefits than paid by employer and member contributions. Investment liquidity will become an important issue beginning in the next few years. Liquidity needs will increase gradually until eventually leveling off at about 3.5% of assets. The 3.5% annual real investment return (return in excess of inflation) will be used to pay benefits, while the 4% inflation portion of investment return will be needed to maintain the value of the portfolio.
- 5) Benefit payout relative to active member payroll will increase with time, and will level out at over 24% of payroll. Meanwhile, employer and member contributions will level out at about 9.5% of payroll (see page C-18).

- 6) The current funded ratio, 104.0%, gradually decreases towards 100% over the projection period. Since amortization periods never fall below 15 years, the negative unfunded accrued liability slowly gets smaller and smaller in real dollars, but never quite drops to zero. This smooth progression, of course, is based on a constant 7.5% projected investment return.

- 7) An interesting finding relates to the program of annual post-retirement benefit increases. The valuation assumption for investment return is 7.5% annually, and for post-retirement increases 2.88%, compounded annually. The projection assumes that a 7.5% annual rate of investment return is earned on the entire portfolio (including the retiree portion of the assets). Based on the projected 7.5% annual return, an annual 2.88% compound post-retirement benefit increase is supportable indefinitely. Annual increases above 2.88%, up to the maximum 4% average increase specified in statute, cannot be financed indefinitely by the Reserve for Future Experience in the Benefit Reserve Fund (\$280 million as of February 28, 2001). However, it turns out that unless investment return exceeds 7.5% on average, the Reserve for Future Experience will be exhausted in about 30-40 years (if the full 4% COLA is granted). Therefore, investment income in excess of 7.5% will be needed to maintain the 4% annual benefit increases.

Characteristics of Future Members

The assumed characteristics of future members have a powerful effect on the results of 50-year projections, since future members are the major portion of the active member group for most of the 50 years (see page C-5).

The characteristics assumed for these projections are those of current members at the time they were hired.

Characteristics of Future Members At Time of Employment	
Age	Percent
Below 25	22.4%
25-29	21.4%
30-34	16.0%
35-39	13.6%
40-44	11.0%
45-49	7.6%
50-54	4.7%
55 & Up	3.3%
Total	100.0%
Males	65.2%
Females	34.8%
Total	100.0%
Average Pay (2001 \$)	\$25,356

LAGERS Active Member Population 2002-2051

February 28	Active Members			February 28	Active Members		
	Present	Future	Total		Present	Future	Total
2002	23,690	2,733	26,423	2027	1,683	24,740	26,423
2003	21,589	4,834	26,423	2028	1,429	24,994	26,423
2004	19,815	6,608	26,423	2029	1,205	25,218	26,423
2005	18,269	8,154	26,423	2030	1,006	25,417	26,423
2006	16,889	9,534	26,423	2031	833	25,590	26,423
2007	15,617	10,806	26,423	2032	684	25,739	26,423
2008	14,426	11,997	26,423	2033	553	25,870	26,423
2009	13,298	13,125	26,423	2034	441	25,982	26,423
2010	12,234	14,189	26,423	2035	346	26,077	26,423
2011	11,228	15,195	26,423	2036	269	26,154	26,423
2012	10,279	16,144	26,423	2037	205	26,218	26,423
2013	9,392	17,031	26,423	2038	154	26,269	26,423
2014	8,560	17,863	26,423	2039	113	26,310	26,423
2015	7,779	18,644	26,423	2040	81	26,342	26,423
2016	7,047	19,376	26,423	2041	56	26,367	26,423
2017	6,351	20,072	26,423	2042	38	26,385	26,423
2018	5,696	20,727	26,423	2043	25	26,398	26,423
2019	5,084	21,339	26,423	2044	16	26,407	26,423
2020	4,517	21,906	26,423	2045	10	26,413	26,423
2021	3,991	22,432	26,423	2046	6	26,417	26,423
2022	3,508	22,915	26,423	2047	4	26,419	26,423
2023	3,064	23,359	26,423	2048	2	26,421	26,423
2024	2,663	23,760	26,423	2049	1	26,422	26,423
2025	2,302	24,121	26,423	2050	0	26,423	26,423
2026	1,976	24,447	26,423	2051	0	26,423	26,423

Within 9 years it is expected that over half of the active member population will consist of people entering the system after the valuation date (February 28, 2001).

LAGERS Present Active Members 2002-2051

February 28	Present Active Members	Group Averages		February 28	Present Active Members	Group Averages	
		Age	Service			Age	Service
2002	23,690	43.9	10.3	2027	1,683	57.7	30.8
2003	21,589	44.8	11.3	2028	1,429	58.1	31.6
2004	19,815	45.6	12.4	2029	1,205	58.6	32.4
2005	18,269	46.4	13.3	2030	1,006	59.0	33.1
2006	16,889	47.1	14.2	2031	833	59.4	33.9
2007	15,617	47.8	15.1	2032	684	59.9	34.7
2008	14,426	48.5	16.0	2033	553	60.3	35.5
2009	13,298	49.2	16.9	2034	441	60.8	36.3
2010	12,234	49.8	17.7	2035	346	61.2	37.1
2011	11,228	50.4	18.6	2036	269	61.6	37.9
2012	10,279	51.0	19.4	2037	205	62.1	38.8
2013	9,392	51.6	20.2	2038	154	62.5	39.6
2014	8,560	52.1	21.0	2039	113	63.0	40.5
2015	7,779	52.7	21.8	2040	81	63.5	41.3
2016	7,047	53.2	22.6	2041	56	64.1	42.2
2017	6,351	53.6	23.3	2042	38	64.7	43.1
2018	5,696	54.1	24.1	2043	25	65.3	44.0
2019	5,084	54.5	24.9	2044	16	66.0	44.9
2020	4,517	54.9	25.6	2045	10	66.6	45.8
2021	3,991	55.3	26.3	2046	6	67.3	46.7
2022	3,508	55.7	27.1	2047	4	67.9	47.6
2023	3,064	56.1	27.8	2048	2	68.3	48.4
2024	2,663	56.5	28.6	2049	1	68.9	49.3
2025	2,302	56.9	29.3	2050	0	69.3	50.2
2026	1,976	57.3	30.1	2051	0	69.7	51.0

Approximately 92% of the current active population will no longer be active after 25 years.

**LAGERS Future Active Members
2002-2051**

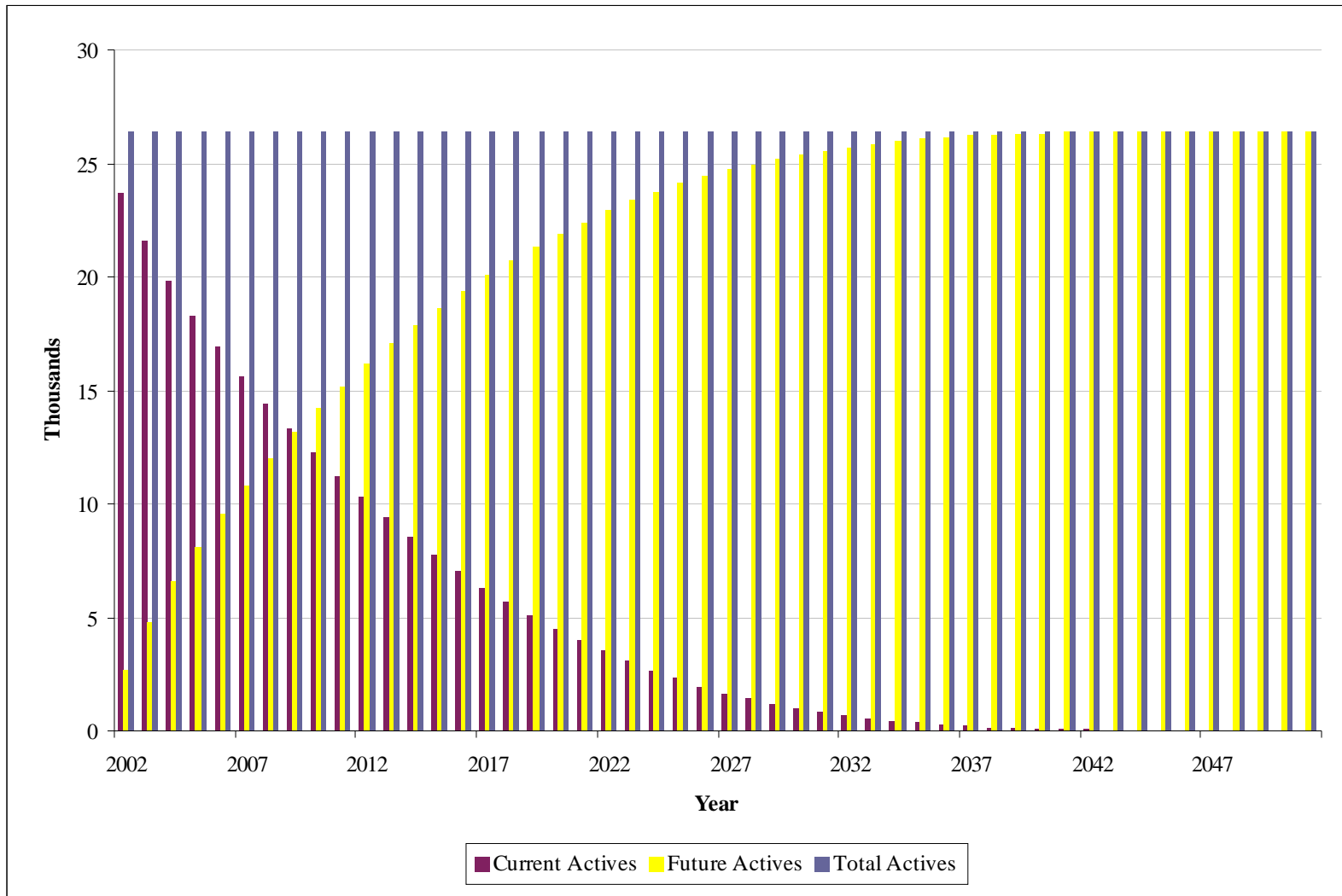
February 28	Future Active Members	Group Averages		February 28	Future Active Members	Group Averages	
		Age	Service			Age	Service
2002	2,733	33.3	0.0	2027	24,740	40.7	8.1
2003	4,834	33.7	0.6	2028	24,994	40.8	8.3
2004	6,608	34.1	0.9	2029	25,218	41.0	8.5
2005	8,154	34.5	1.3	2030	25,417	41.1	8.7
2006	9,534	34.9	1.7	2031	25,590	41.2	8.9
2007	10,806	35.2	2.1	2032	25,739	41.4	9.0
2008	11,997	35.6	2.4	2033	25,870	41.5	9.2
2009	13,125	35.9	2.8	2034	25,982	41.5	9.3
2010	14,189	36.3	3.1	2035	26,077	41.6	9.4
2011	15,195	36.6	3.5	2036	26,154	41.7	9.5
2012	16,144	36.9	3.8	2037	26,218	41.7	9.6
2013	17,031	37.3	4.2	2038	26,269	41.8	9.6
2014	17,863	37.6	4.5	2039	26,310	41.8	9.7
2015	18,644	37.9	4.8	2040	26,342	41.9	9.7
2016	19,376	38.2	5.1	2041	26,367	41.9	9.8
2017	20,072	38.4	5.5	2042	26,385	41.9	9.8
2018	20,727	38.7	5.8	2043	26,398	41.9	9.8
2019	21,339	39.0	6.1	2044	26,407	41.9	9.8
2020	21,906	39.2	6.3	2045	26,413	41.9	9.8
2021	22,432	39.5	6.6	2046	26,417	41.9	9.8
2022	22,915	39.7	6.9	2047	26,419	41.9	9.8
2023	23,359	39.9	7.2	2048	26,421	41.9	9.8
2024	23,760	40.1	7.4	2049	26,422	41.9	9.8
2025	24,121	40.3	7.7	2050	26,423	41.9	9.8
2026	24,447	40.5	7.9	2051	26,423	41.9	9.8

LAGERS Total Active Members Group Averages - 2002-2051

February 28	Total Active Members	Group Averages				February 28	Total Active Members	Group Averages			
		Age	Service	Pay				Age	Service	Pay	
				Inflated	2002 \$					Inflated	2002 \$
2002	26,423	42.8	9.2	\$31,936	\$31,936	2027	26,423	41.8	9.6	\$85,884	\$32,217
2003	26,423	42.7	9.4	33,289	32,009	2028	26,423	41.8	9.6	89,406	32,248
2004	26,423	42.7	9.5	34,686	32,069	2029	26,423	41.8	9.6	93,074	32,280
2005	26,423	42.7	9.6	36,121	32,111	2030	26,423	41.8	9.6	96,880	32,307
2006	26,423	42.7	9.7	37,605	32,145	2031	26,423	41.8	9.7	100,834	32,333
2007	26,423	42.7	9.8	39,130	32,162	2032	26,423	41.8	9.7	104,941	32,355
2008	26,423	42.6	9.8	40,710	32,174	2033	26,423	41.9	9.7	109,201	32,374
2009	26,423	42.6	9.9	42,334	32,170	2034	26,423	41.9	9.7	113,628	32,391
2010	26,423	42.5	9.9	44,019	32,164	2035	26,423	41.9	9.8	118,227	32,405
2011	26,423	42.5	9.9	45,763	32,152	2036	26,423	41.9	9.8	123,009	32,419
2012	26,423	42.4	9.9	47,571	32,137	2037	26,423	41.9	9.8	127,978	32,432
2013	26,423	42.3	9.9	49,449	32,121	2038	26,423	41.9	9.8	133,144	32,443
2014	26,423	42.3	9.8	51,403	32,106	2039	26,423	41.9	9.8	138,510	32,452
2015	26,423	42.2	9.8	53,437	32,093	2040	26,423	41.9	9.8	144,081	32,459
2016	26,423	42.2	9.8	55,553	32,080	2041	26,423	41.9	9.8	149,868	32,464
2017	26,423	42.1	9.8	57,757	32,070	2042	26,423	41.9	9.8	155,879	32,468
2018	26,423	42.0	9.7	60,055	32,064	2043	26,423	41.9	9.8	162,123	32,470
2019	26,423	42.0	9.7	62,458	32,064	2044	26,423	41.9	9.8	168,612	32,470
2020	26,423	41.9	9.6	64,966	32,069	2045	26,423	41.9	9.8	175,354	32,470
2021	26,423	41.9	9.6	67,589	32,081	2046	26,423	41.9	9.8	182,361	32,469
2022	26,423	41.8	9.6	70,328	32,097	2047	26,423	41.9	9.8	189,644	32,467
2023	26,423	41.8	9.6	73,183	32,115	2048	26,423	41.9	9.8	197,216	32,464
2024	26,423	41.8	9.5	76,164	32,138	2049	26,423	41.9	9.8	205,088	32,462
2025	26,423	41.8	9.6	79,272	32,163	2050	26,423	41.9	9.8	213,274	32,459
2026	26,423	41.8	9.6	82,513	32,190	2051	26,423	41.9	9.8	221,788	32,457

Average pay in year 2002 dollars provides a constant measure of purchasing power. In 2051, a participant earning a pay of \$221,788 will be in the same relative financial position as the average participant today.

Active Population – Present and Future

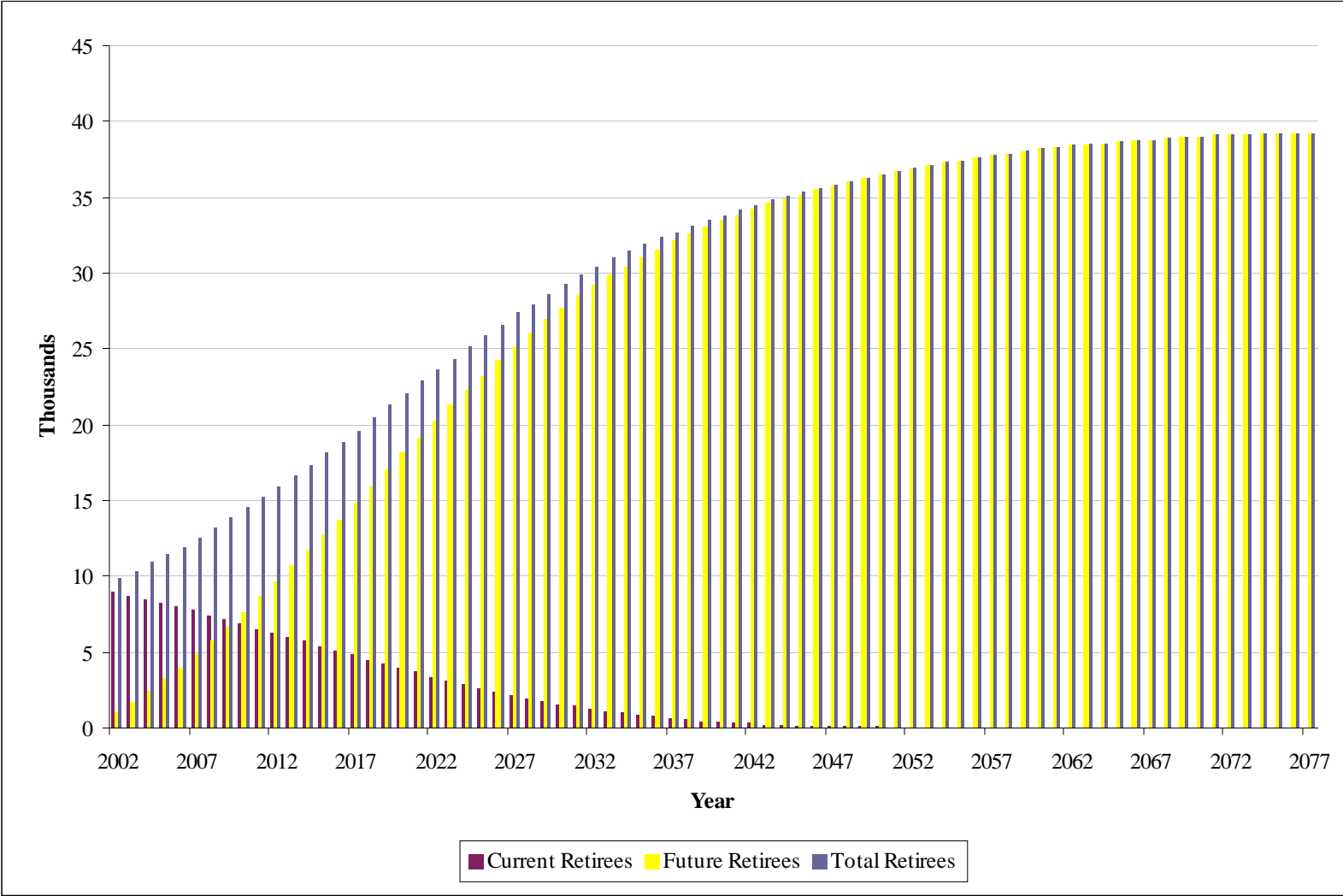


LAGERS Retiree Population 2002-2051

February 28	Retirees			February 28	Retirees		
	Present	Future	Total		Present	Future	Total
2002	8,973	967	9,940	2027	2,175	25,176	27,351
2003	8,740	1,675	10,415	2028	1,965	26,057	28,022
2004	8,502	2,444	10,946	2029	1,768	26,933	28,701
2005	8,253	3,221	11,474	2030	1,582	27,718	29,300
2006	7,996	4,000	11,996	2031	1,410	28,498	29,908
2007	7,726	4,849	12,575	2032	1,247	29,215	30,462
2008	7,449	5,767	13,216	2033	1,103	29,902	31,005
2009	7,163	6,703	13,866	2034	967	30,497	31,464
2010	6,874	7,685	14,559	2035	846	31,060	31,906
2011	6,581	8,648	15,229	2036	736	31,594	32,330
2012	6,287	9,645	15,932	2037	635	32,114	32,749
2013	5,995	10,665	16,660	2038	547	32,596	33,143
2014	5,705	11,683	17,388	2039	472	33,048	33,520
2015	5,406	12,708	18,114	2040	399	33,479	33,878
2016	5,111	13,775	18,886	2041	339	33,878	34,217
2017	4,817	14,853	19,670	2042	289	34,241	34,530
2018	4,525	15,947	20,472	2043	243	34,587	34,830
2019	4,234	17,032	21,266	2044	203	34,915	35,118
2020	3,951	18,137	22,088	2045	169	35,225	35,394
2021	3,670	19,222	22,892	2046	142	35,516	35,658
2022	3,397	20,254	23,651	2047	117	35,791	35,908
2023	3,134	21,271	24,405	2048	97	36,049	36,146
2024	2,878	22,287	25,165	2049	78	36,290	36,368
2025	2,633	23,280	25,913	2050	65	36,517	36,582
2026	2,400	24,259	26,659	2051	54	36,732	36,786

The present retiree group changes much more gradually than the active member group. Just over half of the present retiree group is expected to be still drawing benefits after 15 years.

Retiree Population – Present and Future

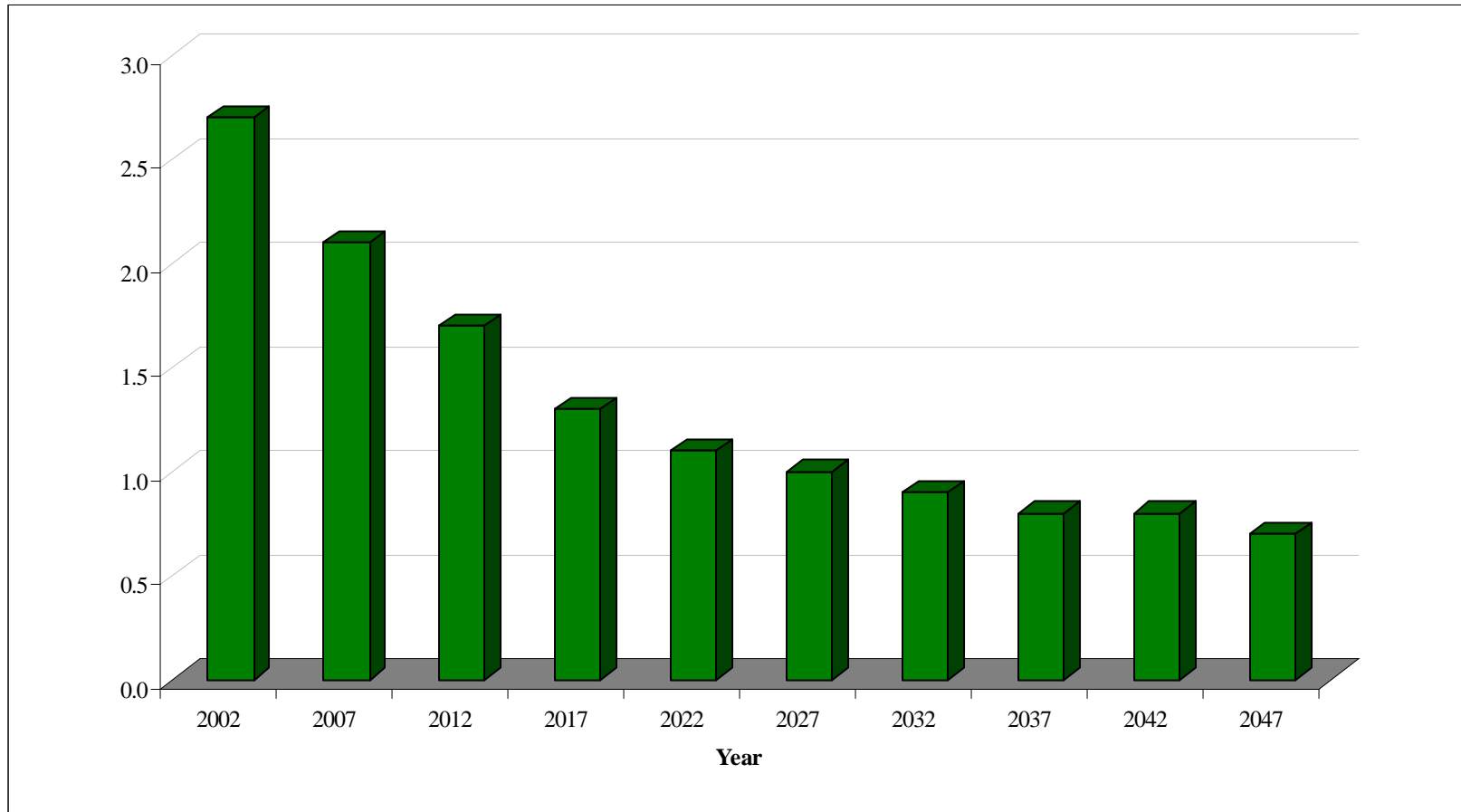


Ratio of Active Members to Retirees - 2002-2051

February 28	Active Members	Retirees	A/R	February 28	Active Members	Retirees	A/R
2002	26,423	9,940	2.7	2027	26,423	27,351	1.0
2003	26,423	10,415	2.5	2028	26,423	28,022	0.9
2004	26,423	10,946	2.4	2029	26,423	28,701	0.9
2005	26,423	11,474	2.3	2030	26,423	29,300	0.9
2006	26,423	11,996	2.2	2031	26,423	29,908	0.9
2007	26,423	12,575	2.1	2032	26,423	30,462	0.9
2008	26,423	13,216	2.0	2033	26,423	31,005	0.9
2009	26,423	13,866	1.9	2034	26,423	31,464	0.8
2010	26,423	14,559	1.8	2035	26,423	31,906	0.8
2011	26,423	15,229	1.7	2036	26,423	32,330	0.8
2012	26,423	15,932	1.7	2037	26,423	32,749	0.8
2013	26,423	16,660	1.6	2038	26,423	33,143	0.8
2014	26,423	17,388	1.5	2039	26,423	33,520	0.8
2015	26,423	18,114	1.5	2040	26,423	33,878	0.8
2016	26,423	18,886	1.4	2041	26,423	34,217	0.8
2017	26,423	19,670	1.3	2042	26,423	34,530	0.8
2018	26,423	20,472	1.3	2043	26,423	34,830	0.8
2019	26,423	21,266	1.2	2044	26,423	35,118	0.8
2020	26,423	22,088	1.2	2045	26,423	35,394	0.7
2021	26,423	22,892	1.2	2046	26,423	35,658	0.7
2022	26,423	23,651	1.1	2047	26,423	35,908	0.7
2023	26,423	24,405	1.1	2048	26,423	36,146	0.7
2024	26,423	25,165	1.0	2049	26,423	36,368	0.7
2025	26,423	25,913	1.0	2050	26,423	36,582	0.7
2026	26,423	26,659	1.0	2051	26,423	36,786	0.7

The ratio of active members to retirees (A/R) is expected to decline steadily until it reaches a level of about 0.7. This is a reasonable result, given the mixture of retirement conditions in LAGERS, the 5 year vesting provision, and the large number of non-contributory members.

Ratio of Active Members to Retirees

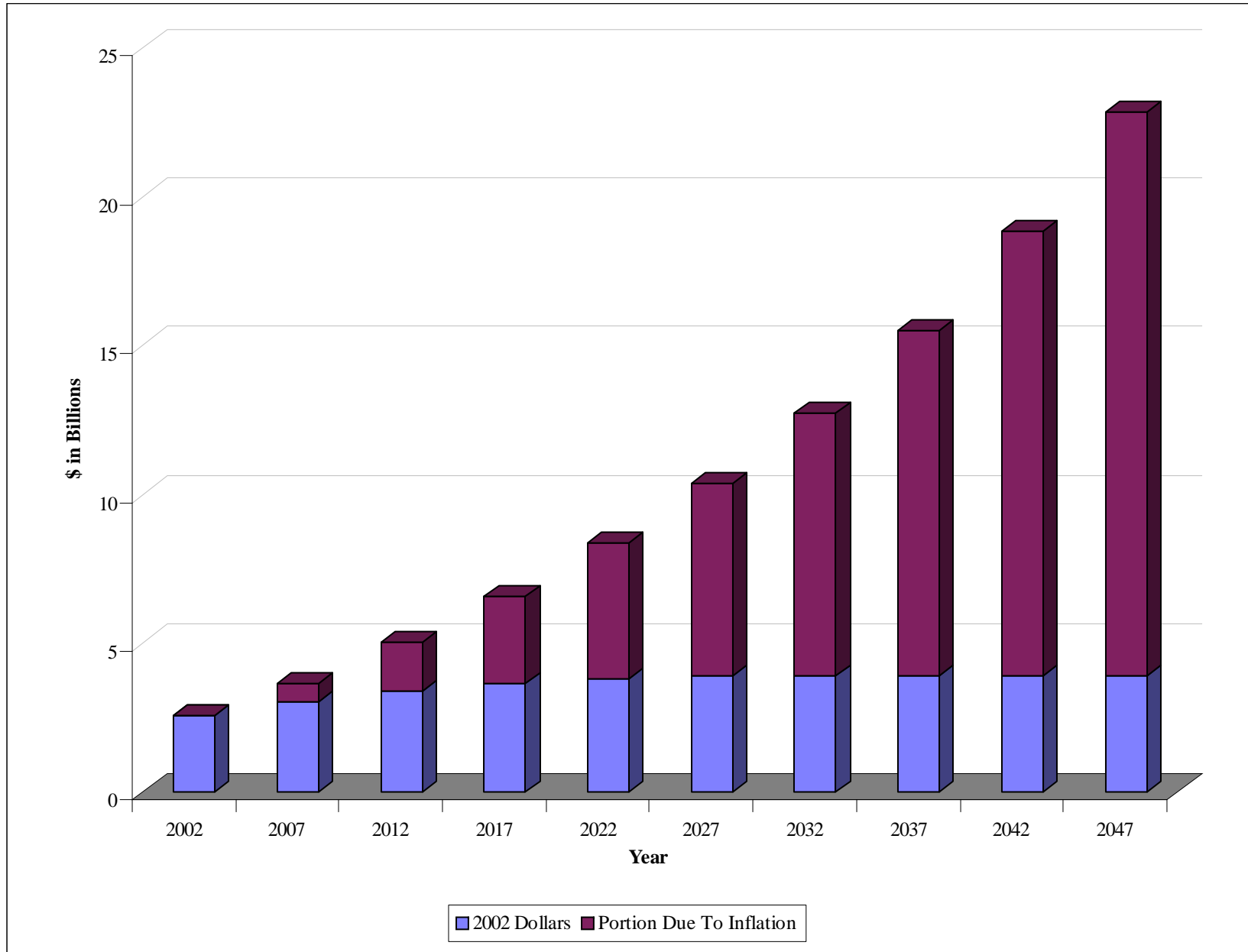


50 Year Fund Projection

Based on Valuation Assumptions – (\$ in Thousands)

Year Ended February 28	Assets BOY	Contributions				Benefits	Investment Income	Assets EOY	
		Current Cost	Disability Cost	UAAL Payment	Total			Inflated	2002 \$
2002	\$2,395,913	\$75,242	\$4,971	(\$12,256)	\$67,957	\$63,342	\$179,867	\$2,580,395	\$2,580,395
2003	2,580,395	78,458	5,184	(10,865)	72,777	71,016	193,595	2,775,751	2,668,991
2004	2,775,751	81,767	5,402	(9,601)	77,568	79,194	208,121	2,982,246	2,757,254
2005	2,982,246	85,174	5,627	(8,314)	82,487	88,069	223,459	3,200,123	2,844,898
2006	3,200,123	88,685	5,859	(7,146)	87,398	97,960	239,613	3,429,174	2,931,273
2007	3,429,174	92,306	6,099	(6,166)	92,239	108,317	256,585	3,669,681	3,016,210
2008	3,669,681	96,041	6,345	(5,168)	97,218	119,886	274,376	3,921,389	3,099,131
2009	3,921,389	99,895	6,600	(5,433)	101,062	132,557	292,923	4,182,817	3,178,597
2010	4,182,817	103,876	6,863	(6,917)	103,822	146,314	312,117	4,452,442	3,253,356
2011	4,452,442	108,001	7,136	(7,803)	107,334	161,238	331,911	4,730,449	3,323,551
2012	4,730,449	112,274	7,418	(7,147)	112,545	177,408	352,351	5,017,937	3,389,938
2013	5,017,937	116,707	7,711	(6,664)	117,754	194,609	373,464	5,314,546	3,452,228
2014	5,314,546	121,318	8,015	(6,186)	123,147	212,803	395,229	5,620,119	3,510,310
2015	5,620,119	126,115	8,332	(5,674)	128,773	232,022	417,637	5,934,507	3,564,111
2016	5,934,507	131,106	8,662	(5,486)	134,282	252,120	440,669	6,257,338	3,613,457
2017	6,257,338	136,303	9,005	(5,374)	139,934	273,237	464,302	6,588,337	3,658,269
2018	6,588,337	141,719	9,363	(5,281)	145,801	295,204	488,522	6,927,456	3,698,626
2019	6,927,456	147,374	9,737	(5,188)	151,923	317,840	513,337	7,274,876	3,734,727
2020	7,274,876	153,280	10,127	(5,099)	158,308	341,316	538,752	7,630,620	3,766,689
2021	7,630,620	159,452	10,535	(5,016)	164,971	365,608	564,772	7,994,755	3,794,650
2022	7,994,755	165,902	10,961	(4,944)	171,919	390,371	591,414	8,367,717	3,818,917
2023	8,367,717	172,631	11,406	(4,872)	179,165	415,438	618,718	8,750,162	3,839,865
2024	8,750,162	179,651	11,869	(4,802)	186,718	441,005	646,726	9,142,601	3,857,770
2025	9,142,601	186,975	12,353	(4,733)	194,595	467,111	675,477	9,545,562	3,872,886
2026	9,545,562	194,613	12,858	(4,664)	202,807	493,689	705,009	9,959,689	3,885,488
2027	9,959,689	202,567	13,383	(4,597)	211,353	520,603	735,379	10,385,818	3,895,895
2028	10,385,818	210,859	13,931	(4,531)	220,259	547,837	766,652	10,824,892	3,904,422
2029	10,824,892	219,507	14,503	(4,465)	229,545	575,664	798,888	11,277,661	3,911,280
2030	11,277,661	228,497	15,097	(4,401)	239,193	604,048	832,142	11,744,948	3,916,676
2031	11,744,948	237,831	15,713	(4,337)	249,207	632,968	866,481	12,227,668	3,920,819
2032	12,227,668	247,529	16,354	(4,275)	259,608	662,658	901,961	12,726,579	3,923,842
2033	12,726,579	257,594	17,019	(4,213)	270,400	692,990	938,646	13,242,635	3,925,915
2034	13,242,635	268,044	17,710	(4,152)	281,602	723,907	976,610	13,776,940	3,927,226
2035	13,776,940	278,902	18,427	(4,092)	293,237	755,623	1,015,930	14,330,484	3,927,902
2036	14,330,484	290,186	19,172	(4,033)	305,325	788,190	1,056,679	14,904,298	3,928,059
2037	14,904,298	301,916	19,947	(3,975)	317,888	821,675	1,098,931	15,499,442	3,927,798
2038	15,499,442	314,107	20,753	(3,918)	330,942	856,327	1,142,757	16,116,814	3,927,163
2039	16,116,814	326,777	21,590	(3,861)	344,506	892,139	1,188,224	16,757,405	3,926,207
2040	16,757,405	339,934	22,459	(3,805)	358,588	929,254	1,235,405	17,422,144	3,924,955
2041	17,422,144	353,597	23,362	(3,750)	373,209	967,782	1,284,364	18,111,935	3,923,418
2042	18,111,935	367,789	24,300	(3,696)	388,393	1,007,614	1,335,173	18,827,887	3,921,643
2043	18,827,887	382,531	25,274	(3,643)	404,162	1,048,824	1,387,917	19,571,142	3,919,668
2044	19,571,142	397,848	26,286	(3,590)	420,544	1,091,577	1,442,671	20,342,780	3,917,509
2045	20,342,780	413,763	27,337	(3,538)	437,562	1,135,972	1,499,518	21,143,888	3,915,176
2046	21,143,888	430,302	28,430	(3,487)	455,245	1,182,079	1,558,535	21,975,589	3,912,673
2047	21,975,589	447,492	29,566	(3,437)	473,621	1,229,990	1,619,804	22,839,024	3,910,005
2048	22,839,024	465,362	30,746	(3,387)	492,721	1,279,789	1,683,411	23,735,367	3,907,170
2049	23,735,367	483,940	31,974	(3,339)	512,575	1,331,565	1,749,441	24,665,818	3,904,169
2050	24,665,818	503,257	33,250	(3,290)	533,217	1,385,404	1,817,979	25,631,610	3,900,997
2051	25,631,610	523,346	34,577	(3,243)	554,680	1,441,400	1,889,119	26,634,009	3,897,651

Projected Trust Fund Assets

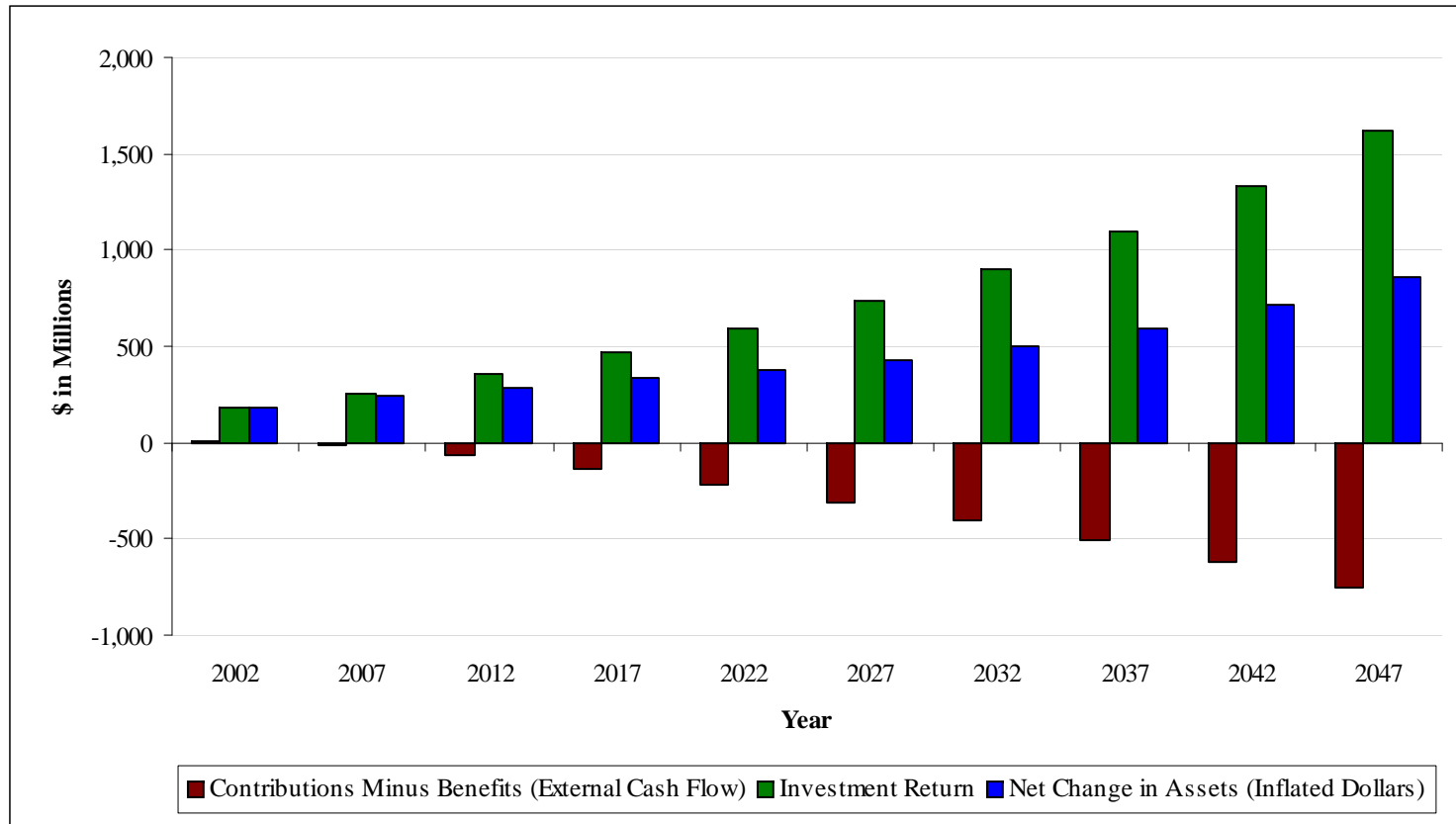


Projected Non-Investment Cash Flow
2002-2051 – (\$ in Thousands)

Year Ended February 28	External Cash Flow		Net External Cash Flow		Year Ended February 28	External Cash Flow	
	Inflow	Outflow	\$	% of Assets		Inflow	Outflow
2002	\$67,957	\$63,342	\$4,615	0.19 %	2027	\$211,353	\$520,603
2003	72,777	71,016	1,761	0.07 %	2028	220,259	547,837
2004	77,568	79,194	(1,626)	(0.06)%	2029	229,545	575,664
2005	82,487	88,069	(5,582)	(0.19)%	2030	239,193	604,048
2006	87,398	97,960	(10,562)	(0.33)%	2031	249,207	632,968
2007	92,239	108,317	(16,078)	(0.47)%	2032	259,608	662,658
2008	97,218	119,886	(22,668)	(0.62)%	2033	270,400	692,990
2009	101,062	132,557	(31,495)	(0.80)%	2034	281,602	723,907
2010	103,822	146,314	(42,492)	(1.02)%	2035	293,237	755,623
2011	107,334	161,238	(53,904)	(1.21)%	2036	305,325	788,190
2012	112,545	177,408	(64,863)	(1.37)%	2037	317,888	821,675
2013	117,754	194,609	(76,855)	(1.53)%	2038	330,942	856,327
2014	123,147	212,803	(89,656)	(1.69)%	2039	344,506	892,139
2015	128,773	232,022	(103,249)	(1.84)%	2040	358,588	929,254
2016	134,282	252,120	(117,838)	(1.99)%	2041	373,209	967,782
2017	139,934	273,237	(133,303)	(2.13)%	2042	388,393	1,007,614
2018	145,801	295,204	(149,403)	(2.27)%	2043	404,162	1,048,824
2019	151,923	317,840	(165,917)	(2.40)%	2044	420,544	1,091,577
2020	158,308	341,316	(183,008)	(2.52)%	2045	437,562	1,135,972
2021	164,971	365,608	(200,637)	(2.63)%	2046	455,245	1,182,079
2022	171,919	390,371	(218,452)	(2.73)%	2047	473,621	1,229,990
2023	179,165	415,438	(236,273)	(2.82)%	2048	492,721	1,279,789
2024	186,718	441,005	(254,287)	(2.91)%	2049	512,575	1,331,565
2025	194,595	467,111	(272,516)	(2.98)%	2050	533,217	1,385,404
2026	202,807	493,689	(290,882)	(3.05)%	2051	554,680	1,441,400

The net external cash flow is currently in a positive position (i.e. benefits paid are less than contributions received). It is expected to decline steadily over the next 50 years. During this time, benefits paid will begin to exceed contributions received. Investment return will be needed to pay benefits (a natural result from level contribution financing). Long range, the 3.5% annual real investment return (return in excess of inflation) will be needed to pay benefits. The remainder of investment return (the inflation portion) is needed to preserve the purchasing power of the assets.

Projected Net Change in Assets Amounts of INFLATED Dollars



The results shown in the above chart do not show changes of constant value, because amounts of change are inflated dollar amounts.

The Net Change in Assets, the blue bars, indicate perpetual additions to trust fund assets. While this is true (and necessary) in inflated dollars, it is not true in terms of constant value. Constant value changes are shown by the chart on page C-15.

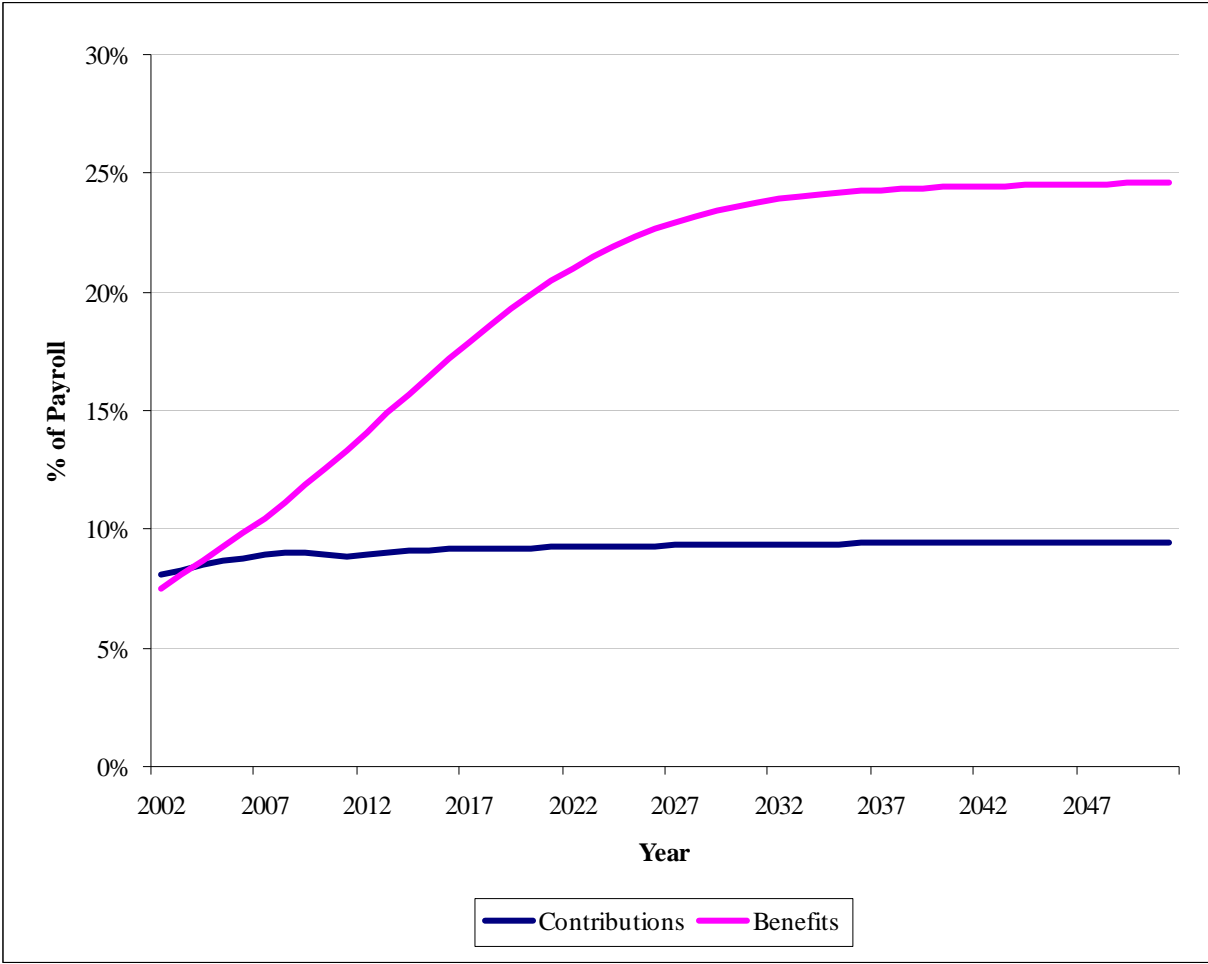
LAGERS Cash Flows as %'s of Payroll - 2002-2051

Year Ended February 28	External Cash Flow		Investment Return	Year Ended February 28	External Cash Flow		Investment Return
	Contributions Received	Benefits Paid			Contributions Received	Benefits Paid	
2002	8.07%	7.52%	21.35%	2027	9.32%	22.95%	32.42%
2003	8.28%	8.08%	22.03%	2028	9.33%	23.20%	32.47%
2004	8.47%	8.65%	22.73%	2029	9.34%	23.42%	32.50%
2005	8.65%	9.23%	23.43%	2030	9.35%	23.61%	32.52%
2006	8.80%	9.86%	24.13%	2031	9.36%	23.77%	32.53%
2007	8.92%	10.48%	24.82%	2032	9.37%	23.91%	32.54%
2008	9.04%	11.15%	25.51%	2033	9.37%	24.02%	32.54%
2009	9.03%	11.85%	26.19%	2034	9.38%	24.12%	32.54%
2010	8.93%	12.58%	26.83%	2035	9.39%	24.19%	32.53%
2011	8.87%	13.33%	27.44%	2036	9.40%	24.26%	32.52%
2012	8.95%	14.11%	28.03%	2037	9.40%	24.30%	32.50%
2013	9.01%	14.89%	28.58%	2038	9.41%	24.35%	32.49%
2014	9.06%	15.66%	29.09%	2039	9.41%	24.38%	32.47%
2015	9.12%	16.43%	29.57%	2040	9.42%	24.41%	32.45%
2016	9.15%	17.17%	30.02%	2041	9.43%	24.44%	32.44%
2017	9.17%	17.90%	30.42%	2042	9.43%	24.47%	32.42%
2018	9.19%	18.60%	30.78%	2043	9.43%	24.48%	32.40%
2019	9.21%	19.26%	31.11%	2044	9.44%	24.50%	32.38%
2020	9.22%	19.88%	31.39%	2045	9.44%	24.52%	32.36%
2021	9.24%	20.48%	31.63%	2046	9.45%	24.53%	32.34%
2022	9.25%	21.01%	31.83%	2047	9.45%	24.55%	32.32%
2023	9.27%	21.49%	32.01%	2048	9.45%	24.56%	32.30%
2024	9.28%	21.92%	32.15%	2049	9.46%	24.57%	32.28%
2025	9.29%	22.31%	32.26%	2050	9.46%	24.58%	32.26%
2026	9.31%	22.65%	32.35%	2051	9.46%	24.60%	32.23%

This schedule demonstrates two important points:

1. Benefit payout continues to grow in real dollars rising steadily throughout the projection period, and
2. Investment return has already become the largest source of revenue for the retirement system – a natural result of level contribution financing.

Projected Pattern of Contribution Income and Benefit Payout



LAGERS Projected Financial Growth Rates 2002-2051

Year Ended February 28	Contributions	Benefits	Assets	Year Ended February 28	Contributions	Benefits	Assets
2003	7.09%	12.12%	7.57%	2028	4.21%	5.23%	4.23%
2004	6.58%	11.51%	7.44%	2029	4.22%	5.08%	4.18%
2005	6.34%	11.21%	7.31%	2030	4.20%	4.93%	4.14%
2006	5.95%	11.23%	7.16%	2031	4.19%	4.79%	4.11%
2007	5.54%	10.57%	7.01%	2032	4.17%	4.69%	4.08%
2008	5.40%	10.68%	6.86%	2033	4.16%	4.58%	4.05%
2009	3.95%	10.57%	6.67%	2034	4.14%	4.46%	4.03%
2010	2.73%	10.38%	6.45%	2035	4.13%	4.38%	4.02%
2011	3.38%	10.20%	6.24%	2036	4.12%	4.31%	4.00%
2012	4.85%	10.03%	6.08%	2037	4.11%	4.25%	3.99%
2013	4.63%	9.70%	5.91%	2038	4.11%	4.22%	3.98%
2014	4.58%	9.35%	5.75%	2039	4.10%	4.18%	3.97%
2015	4.57%	9.03%	5.59%	2040	4.09%	4.16%	3.97%
2016	4.28%	8.66%	5.44%	2041	4.08%	4.15%	3.96%
2017	4.21%	8.38%	5.29%	2042	4.07%	4.12%	3.95%
2018	4.19%	8.04%	5.15%	2043	4.06%	4.09%	3.95%
2019	4.20%	7.67%	5.02%	2044	4.05%	4.08%	3.94%
2020	4.20%	7.39%	4.89%	2045	4.05%	4.07%	3.94%
2021	4.21%	7.12%	4.77%	2046	4.04%	4.06%	3.93%
2022	4.21%	6.77%	4.67%	2047	4.04%	4.05%	3.93%
2023	4.21%	6.42%	4.57%	2048	4.03%	4.05%	3.92%
2024	4.22%	6.15%	4.48%	2049	4.03%	4.05%	3.92%
2025	4.22%	5.92%	4.41%	2050	4.03%	4.04%	3.92%
2026	4.22%	5.69%	4.34%	2051	4.03%	4.04%	3.91%
2027	4.21%	5.45%	4.28%	2052	4.02%	4.04%	3.91%

This schedule demonstrates that financial growth rates eventually stabilize at the underlying assumed rate of wage inflation (4.0% for LAGERS).

LAGERS Projected Funded Ratios
2002-2051 – (\$ in Thousands)

Year Ended February 28	Valuation Assets	Accrued Liabilities	Funded Ratio	Year Ended February 28	Valuation Assets	Accrued Liabilities	Funded Ratio
2002	\$2,580,395	\$2,493,026	103.5%	2027	\$10,385,818	\$10,333,282	100.5%
2003	2,775,751	2,693,098	103.1%	2028	10,824,892	10,773,114	100.5%
2004	2,982,246	2,903,350	102.7%	2029	11,277,661	11,226,631	100.5%
2005	3,200,123	3,123,932	102.4%	2030	11,744,948	11,694,654	100.4%
2006	3,429,174	3,354,680	102.2%	2031	12,227,668	12,178,100	100.4%
2007	3,669,681	3,595,995	102.0%	2032	12,726,579	12,677,727	100.4%
2008	3,921,389	3,847,536	101.9%	2033	13,242,635	13,194,488	100.4%
2009	4,182,817	4,109,059	101.8%	2034	13,776,940	13,729,488	100.3%
2010	4,452,442	4,380,326	101.6%	2035	14,330,484	14,283,717	100.3%
2011	4,730,449	4,661,016	101.5%	2036	14,904,298	14,858,206	100.3%
2012	5,017,937	4,950,708	101.4%	2037	15,499,442	15,454,016	100.3%
2013	5,314,546	5,249,185	101.2%	2038	16,116,814	16,072,043	100.3%
2014	5,620,119	5,556,271	101.1%	2039	16,757,405	16,713,281	100.3%
2015	5,934,507	5,871,755	101.1%	2040	17,422,144	17,378,657	100.3%
2016	6,257,338	6,195,569	101.0%	2041	18,111,935	18,069,075	100.2%
2017	6,588,337	6,527,509	100.9%	2042	18,827,887	18,785,646	100.2%
2018	6,927,456	6,867,543	100.9%	2043	19,571,142	19,529,511	100.2%
2019	7,274,876	7,215,849	100.8%	2044	20,342,780	20,301,750	100.2%
2020	7,630,620	7,572,455	100.8%	2045	21,143,888	21,103,450	100.2%
2021	7,994,755	7,937,429	100.7%	2046	21,975,589	21,935,735	100.2%
2022	8,367,717	8,311,219	100.7%	2047	22,839,024	22,799,745	100.2%
2023	8,750,162	8,694,479	100.6%	2048	23,735,367	23,696,655	100.2%
2024	9,142,601	9,087,722	100.6%	2049	24,665,818	24,627,665	100.2%
2025	9,545,562	9,491,475	100.6%	2050	25,631,610	25,594,008	100.1%
2026	9,959,689	9,906,383	100.5%	2051	26,634,009	26,596,950	100.1%

Section D

Asset Data Used in the Valuations



Reported Accrued Assets Available for Benefits February 28, 2001

Statutory Funds	Reported Assets	Actuarial Value of Assets
Employers Accumulation Fund	\$1,358,883,303	\$1,412,925,554
Members Deposit Fund	59,548,771	59,548,771
Benefit Reserve Fund	883,002,553	916,644,950
Casualty Reserve Fund	6,543,997	6,793,323
Total	\$2,307,978,624	\$2,395,912,598

The Actuarial Value of Assets is based on market value, but with a 5-year smoothing of the difference between projected investment return, based on the actuarial assumption, and actual market to market returns. The derivation of the actuarial value of assets (also called the funding value of assets) is shown on pages D-3 and D-4. The funding value adjustment factor is applied to the reported cost value of each employer. The funding value adjustment factor serves two purposes:

- it incorporates the balance in the Income-Expense Fund for actuarial valuation purposes, since it is not allocated until June 30, and
- it converts the reported cost value of assets to the actuarial value of assets.

The Employers Accumulation Fund represents employer contributions accumulated for benefits to or on behalf of present members.

The Members Deposit Fund represents employee contributions accumulated for (1) monthly benefits upon future retirements and (2) refunds upon termination if monthly benefits are not payable.

The Benefit Reserve Fund represents employer and employee reserves held for the monthly benefits being paid to present retired lives.

The Casualty Reserve Fund represents employer contributions accumulated for the added liability incurred when a member becomes a disability retirement.

The Income-Expense Fund represents investment income received less administrative expenses paid. At the end of the system fiscal year interest is paid to the other four Funds from this Fund. The February 28, 2001 balance in the Income-Expense Fund was used for valuation purposes.

Investment Activities

A retirement system acquires and invests assets as the result of following the financial objective of level contribution rates. The Board of Trustees of LAGERS has the responsibility for seeing that the assets are invested effectively and within the limits imposed by law. The Board retains professional money managers to assist in the investment process, and reviews their activities throughout each year. The Board retains another professional firm to provide measurements of investment performance, and their reports are also reviewed regularly.

There follows a table showing investment credits to the various Funds of the system for the last 5 years.

Rates of Investment Return Allocated to LAGERS Fund Accounts

Year Ended June 30	Investment Credits as % of Fund Balance				Inflation Loss % (CPI)
	Casualty Reserve Fund A	Member Deposit Fund B	Benefit Reserve Fund C	Employer Accumulation Fund D	
1997	7.0%	4.0%	11.4%	12.0%	2.3%
1998	7.0	4.0	17.0	18.0	1.7
1999	7.0	4.0	5.6	15.6	2.0
2000	7.0	4.0	14.4	30.5	3.7
2001	7.0	4.0	3.1	5.8	3.2
5 Year Compound Average			10.2%	16.1%	2.6%

- A. Casualty Reserve assets are for the non-accrued service portion of disability benefits to future disabled lives. The investment percent is the rate set for actuarial purposes.
- B. Member Deposit assets are the contributions of present members. The investment percent, set by the Board, affects amounts payable to members who request a refund. The percent does not affect the monthly benefit of a retiring member.
- C. Benefit Reserve assets are for benefits to present retired lives. The investment credit is the remainder of net investment return after crediting the Casualty Reserve assets. This revised allocation of investment credits is intended to provide the resources for additional benefit increases after retirement, and is based upon a 1986 change in the LAGERS law. Beginning in 1999 the investment credit to the Benefit Reserve Fund (BRF) is limited, if the funded ratio of the BRF exceeds 140%.
- D. Employer Accumulation assets are for benefits to future retired lives including the accrued service portion of disability benefits. The investment credit is the remainder of net investment return after crediting the Casualty Reserve assets, followed by a further adjustment for the investment credit to the Member Deposit assets (and beginning in 1999 for any reallocation of investment credits from the Benefit Reserve Fund). The Employer Accumulation Fund is responsible for covering liability increases resulting from inflation losses. The percentages shown include net realized capital gains on sale of investments (cost value).

Missouri LAGERS

Development of Funding Value of Retirement System Assets

Year Ending February 28:	1996	1997	1998	1999
A. Funding Value Beginning of Year	\$1,055,673,623	\$1,199,182,467	\$1,352,136,335	\$1,588,516,530
B. Market Value End of Year	1,327,366,258	1,490,354,747	1,885,644,230	2,011,620,041
C. Market Value Beginning of Year	1,053,667,189	1,327,366,258	1,490,354,747	1,885,644,230
D. Non-Investment/Administrative Net Cash Flow	20,723,057	17,268,282	44,014,639	30,577,683
E. Investment Income				
E1. Market Total: B-C-D	252,976,012	145,720,207	351,274,844	95,398,128
E2. Amount for Immediate Recognition	74,622,461	84,547,163	96,190,056	112,266,376
E3. Amount for Phased-In Recognition: E1-E2	178,353,551	61,173,044	255,084,788	(16,868,248)
F. Phased-In Recognition of Investment Income				
F1. Current Year: 0.20 x E3	35,670,710	12,234,609	51,016,958	(3,373,650)
F2. First Prior Year	(14,985,376)	35,670,710	12,234,609	51,016,958
F3. Second Prior Year	12,238,600	(14,985,376)	35,670,710	12,234,609
F4. Third Prior Year	5,979,878	12,238,600	(14,985,376)	35,670,710
F5. Fourth Prior Year	9,259,514	5,979,880	12,238,599	(14,985,377)
F6. Total Recognized Investment Gain	48,163,326	51,138,423	96,175,500	80,563,250
G. Funding Value End of Year: A + D + E2 + F6	\$1,199,182,467	\$1,352,136,335	\$1,588,516,530	\$1,811,923,839
H. Difference between Market & Funding Value	128,183,791	138,218,412	297,127,700	199,696,202
I. Funding Value Adjustment Factor (ratio of funding value to EAF+MDF+CRF+BRF cost value)	1.1502	1.1283	1.1445	1.0993
J. Recognized Rate of Return	11.52%	11.23%	14.00%	12.02%
K. Market Rate of Return	23.78%	10.91%	23.23%	5.02%

The asset valuation method recognizes assumed investment income (line E2) fully each year. Differences between actual and expected investment income (line E3) are phased in over a closed 5 year period. If in the future, total investment income (line E1) were always equal to assumed investment income (line E2), Funding Value and Market Value would be identical 4 years after the valuation date (line H).

Note: Asset values on this page differ slightly from asset values reported elsewhere in this report, due to a number of miscellaneous closing entries that are not included in the above amounts.

Missouri LAGERS

Development of Funding Value of Retirement System Assets

Year Ending February 28:	2001	2002	2003	2004
A. Funding Value Beginning of Year	\$2,123,617,043			
B. Market Value End of Year	2,489,404,871			
C. Market Value Beginning of Year	2,485,015,501			
D. Non-Investment/Administrative Net Cash Flow	26,601,543			
E. Investment Income				
E1. Market Total: B-C-D	(22,212,173)			
E2. Amount for Immediate Recognition	149,584,247			
E3. Amount for Phased-In Recognition: E1-E2	(171,796,420)			
F. Phased-In Recognition of Investment Income				
F1. Current Year: 0.20 x E3	(34,359,284)			
F2. First Prior Year	64,312,721	(34,359,284)		
F3. Second Prior Year	(3,373,650)	64,312,721	(34,359,284)	
F4. Third Prior Year	51,016,958	(3,373,650)	64,312,721	(34,359,284)
F5. Fourth Prior Year	12,234,608	51,016,956	(3,373,648)	64,312,721
F6. Total Recognized Investment Gain	<u>89,831,353</u>	<u>77,596,743</u>	<u>26,579,789</u>	<u>29,953,437</u>
G. Funding Value End of Year: A + D + E2 + F6	\$2,389,634,186			
H. Difference between Market & Funding Value	99,770,685	22,173,942	(4,405,847)	(34,359,284)
I. Funding Value Adjustment Factor (ratio of funding value to EAF+MDF+CRF+BRF cost value)	1.0381			
J. Recognized Rate of Return	11.20%			
K. Market Rate of Return	-0.89%			

The asset valuation method recognizes assumed investment income (line E2) fully each year. Differences between actual and expected investment income (line E3) are phased in over a closed 5 year period. If in the future, total investment income (line E1) were always equal to assumed investment income (line E2), Funding Value and Market Value would be identical 4 years after the valuation date (line H).

Note: Asset values on this page differ slightly from asset values reported elsewhere in this report, due to a number of miscellaneous closing entries that are not included in the above amounts.

Section E

Benefit Provisions Considered in the Valuation



**Missouri Local Government Employees Retirement System
Brief Summary of LAGERS
Benefits and Conditions Evaluated and/or Considered
Through February 28, 2001
(Section references are to RSMo)**

Voluntary Retirement. Sections 70.645 & 70.600. A member may retire with an age & service allowance after both (i) completing 5 years of credited service, and (ii) attaining the minimum service retirement age.

The minimum service retirement age is age 60 for a general employee and age 55 for a police or fire employee. Optionally, employers may also elect to provide for unreduced benefits for employees whose combination of years of age and years of service equals 80 or more.

Final Average Salary. Section 70.600. The average of a member's monthly compensation during the period of 60 consecutive months (or optionally, 36 consecutive months) of credited service producing the highest monthly average, which period is contained within the 120 consecutive months of credited service immediately preceding retirement.

Age & Service Allowance. Section 70.655. The allowance, payable monthly for life, equals a specified percent of a member's final average salary multiplied by the number of years of credited service. Each employer elects the percent applicable to its members, from the following programs:

- L-1 Benefit Program: 1.00% for life
- L-3 Benefit Program: 1.25% for life
- L-7 Benefit Program: 1.50% for life
- LT-4 Benefit Program: 1.00% for life, plus 1.00% to age 62
- LT-5 Benefit Program: 1.25% for life, plus 0.75% to age 62
- LT-8 Benefit Program: 1.50% for life, plus 0.50% to age 62
- LT-4(65) Benefit Program: 1.00% for life, plus 1.00% to age 65
- LT-5(65) Benefit Program: 1.25% for life, plus 0.75% to age 65
- LT-8(65) Benefit Program: 1.50% for life, plus 0.50% to age 65
- L-9 Benefit Program: 1.60% for life
- LT-10(65) Benefit Program: 1.60% for life, 0.40% to age 65
- L-6 Benefit Program: 2.00% for life

The only LT benefit programs available for adoption after August 1, 1994 are the LT(65) programs.

Benefit program L-11, available only to groups not covered by social security, provides for 2.50% for life.

Subsequent to joining the System the governing body can elect to change benefit programs for the employees, but not more often than once every 2 years.

Early Allowance. Section 70.670. A member may retire with an early allowance after both (i) completing 5 years of credited service, and (ii) attaining age 55 if a general employee or age 50 if a police or fire employee.

The early allowance amount, payable monthly for life, is computed in the same manner as an age & service allowance, based upon the service and earnings record to time of early retirement, but reduced to reflect the fact that the age when payments begin is younger than the minimum service retirement age. The amount of the reduction is 1/2% of 1% (.005) for each month the age at retirement is younger than the minimum service retirement age.

Deferred Allowance. Section 70.675. If a member leaves LAGERS-covered employment (i) before attaining the early retirement age, and (ii) after completing 5 years of credited service, the member becomes eligible for a deferred allowance; provided the former member lives to the minimum service retirement age and does not withdraw the accumulated contributions.

The deferred allowance amount, payable monthly for life from the minimum service retirement age, is computed in the same manner as an age & service allowance, based upon the service and earnings record to time of leaving LAGERS coverage.

Deferred allowances are also payable any time after reaching the early retirement age, with the reduction for early retirement noted on the previous page.

Non-Duty Disability Allowance. Section 70.680. A member with 5 or more years of credited service who becomes totally and permanently disabled from other than duty-connected causes become eligible to receive a non-duty disability allowance computed in the same manner as an age & service allowance, based upon the service & earnings record to time of disability.

Duty Disability Allowance. Section 70.680. A member who becomes totally and permanently disabled from duty-connected causes becomes eligible to receive a duty disability allowance computed in the same manner as an age & service allowance, based upon the earnings record to time of disability but based upon the years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

Death-in-Service. Section 70.661. Upon the death of a member who had completed 5 years of credited service, the eligible surviving dependents receive the following benefits:

(a) The surviving spouse receives an allowance equal to the Option A allowance (joint and 75% survivor benefit) computed based upon the deceased members' service & earnings record to time of death.

(b) When no spouse benefit is payable, the dependent children under age 18 (age 23 if they are full-time students) each receive an equal share of 60% of an age & service allowance computed based upon the deceased member's service & earnings record to time of death.

(c) If the death is determined to be duty related, the 5 year service requirement is waived and the benefit is based on years of credited service the member would have completed had the member continued in LAGERS-covered employment to age 60.

Benefit Changes After Retirement. Section 70.655. For retirements effective after September 28, 1975, there is an annual redetermination of monthly benefit amount, beginning the October first following 12 months of retirement. As of each October first the amount of each eligible benefit is redetermined as follows:

(a) Subject to the maximum in (b), the redetermined amount is the amount otherwise payable multiplied by: 100% plus up to 4%, as determined by the LAGERS Board of Trustees, for each full year of retirement.

(b) The redetermined amount may not exceed the amount otherwise payable multiplied by the ratio of the Consumer Price Index for the immediately preceding month of June to the Consumer Price Index for the month of June immediately preceding retirement.

Member Contributions. Sections 70.690 & 70.700. Each member contributes 4% of compensation beginning after completion of sufficient employment of 6 months of credited service.

If a member leaves LAGERS-covered employment before an allowance is payable, the accumulated contributions are refunded to the member. If the member dies, his accumulated contributions are refunded to a designated beneficiary.

The law governing LAGERS also has a provision for the adoption of a non-contributory plan in which the full cost of LAGERS participation is paid by the employer. Adoption of the non-contributory provisions may be done at the time of membership or a later date; however, a change from contributory to non-contributory or vice-versa may not be made more frequently than every 5 years. Under the non-contributory provisions there is no individual account maintained for each employee and no refund of contributions if an employee terminates before being eligible for a benefit.

Employer Contributions. Section 70.730. Each employer contributes the remainder amounts necessary to finance the employees' participation in LAGERS. Contributions to LAGERS are determined based upon level-percent-of-payroll principles, so that contribution rates do not have to increase over decades of time.

Benefit Programs in Effect as of February 28, 2001

Benefit programs now available to each employer are:

- | | |
|----------------------|---|
| L-1, since 1967 | LT-8, since 1988 |
| L-3, since 1975 | LT-8(65), since 1994 |
| LT-4, since 1977 | L-9, since 1995 |
| LT-4(65), since 1994 | LT-10(65) since 1995 |
| LT-5, since 1977 | L-11, since 2000 |
| LT-5(65), since 1994 | Non-Contributory, since 1983 |
| L-6, since 1987 | 3 Year Final Average Salary (FAS), since 1984 |
| L-7, since 1988 | Rule of 80, since 1988 |

The only LT benefit programs that can be adopted after August 1, 1994 are the LT(65) programs.

Please see pages E-1 through E-3 for a summary of LAGERS provisions.

When the 2001 actuarial valuations were made, the Benefit Programs evaluated were as follows:

FAS	Groups	Benefit Programs																			
		Non-Contributory										Contributory									
		L-1	L-3	LT-4	LT-5	L-6	L-7	LT-8	L-9	LT-10	L-11	L-1	L-3	LT-4	LT-5	L-6	L-7	LT-8	L-9	LT-10	L-11
5 yr.	General	39	37	1	9	3	30	9	4	4		58	28		1	2	11	3	5	1	
	Police	21	24	1	4	2	19	5	1	2		35	12			2	6	2	3		
	Fire	<u>5</u>	<u>7</u>	--	<u>2</u>	--	<u>3</u>	<u>3</u>	--	<u>1</u>		<u>3</u>	<u>2</u>		--	--	<u>1</u>	--	--	--	
	Totals	65	68	2	15	5	52	17	5	7		96	42		1	4	18	5	8	1	
3 yr.	General	13	17	1	8	9	56	19	11	14		17	18		1	5	27	6	5	5	
	Police	6	9	1	8	3	26	13	9	8		4	5		1	2	14	3	5	3	
	Fire	<u>1</u>	<u>3</u>	--	<u>4</u>	<u>3</u>	<u>5</u>	<u>8</u>	<u>1</u>	<u>3</u>		<u>1</u>	--		<u>1</u>	--	<u>1</u>	<u>1</u>	<u>1</u>	--	
	Totals	20	29	2	20	15	87	40	21	25		22	23		3	7	42	10	11	8	

The above LT columns include both the LT(62) and LT(65) benefit programs. The table includes 19 groups with no active members.

Section F

Participant Data

Participating Employers Evaluated February 28, 2001

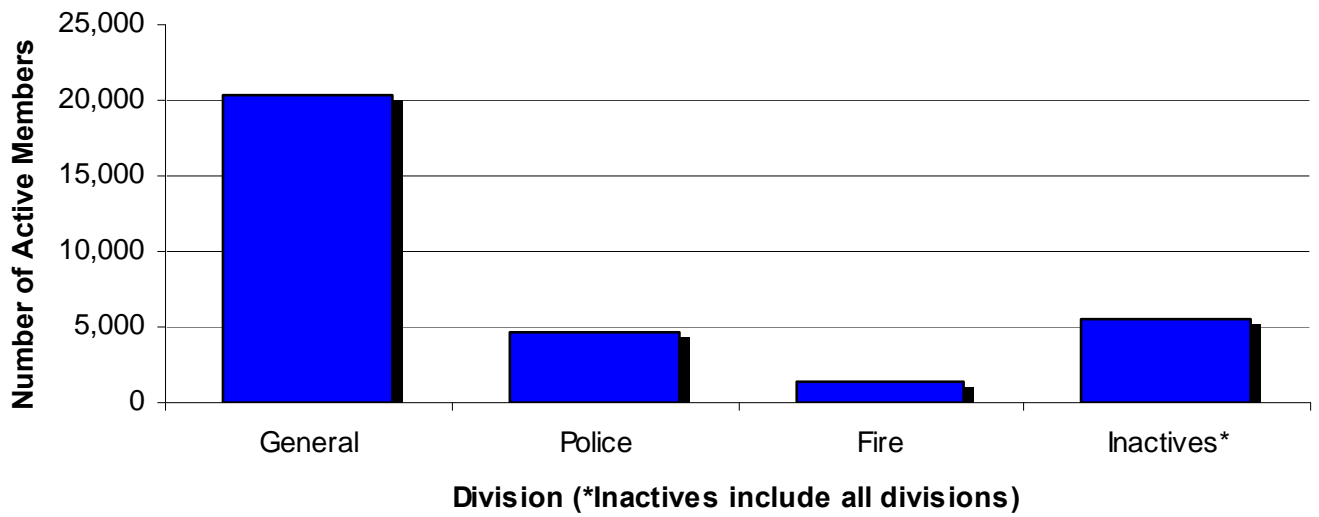
Type of Group	Number of Participating Employers
General Only	203
Fire Only	3
General and Police	202
General and Fire	6
General and Police and Fire	49
Total	463

Active and Inactive Members in Valuations February 28, 2001

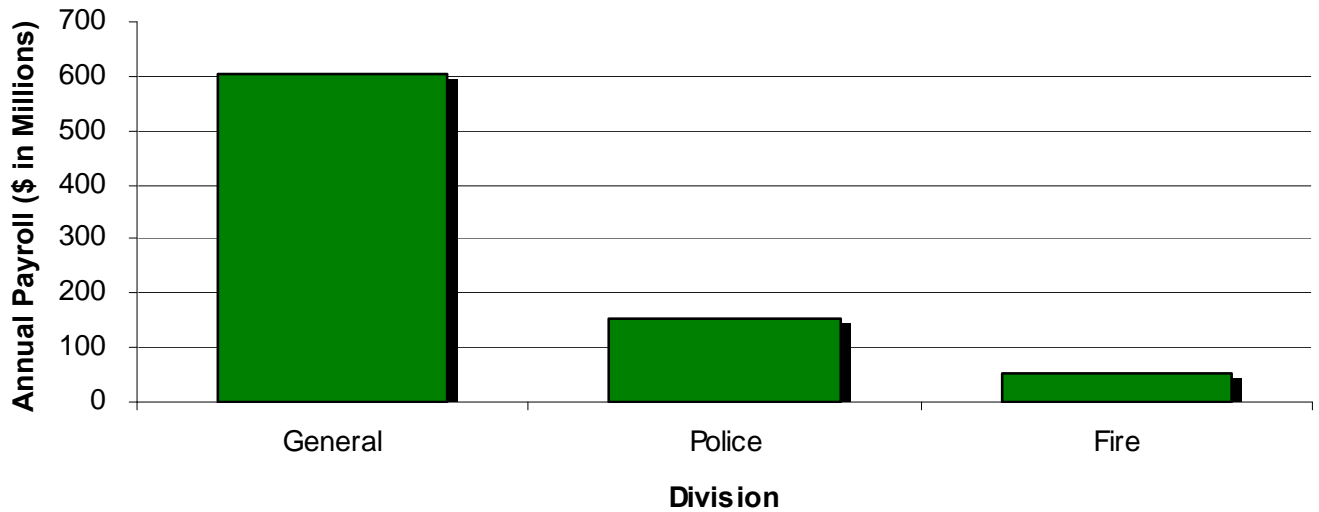
Classification	Number of		Annual Payroll
	Active Members	Valuation Groups*	
Active members			
General	20,369	468	\$605,454,948
Police	4,720	251	152,488,692
Fire	<u>1,334</u>	<u>58</u>	<u>51,015,465</u>
Total Actives	26,423	777	\$808,959,105
Inactive Members	<u>5,567</u>		
Total members	31,990		

* Each Police group and each Fire group is evaluated separately. Each general group is evaluated separately, but also may be broken into sub-groups for separate financial experience if the employer desires separate employer rates for internal accounting purposes.

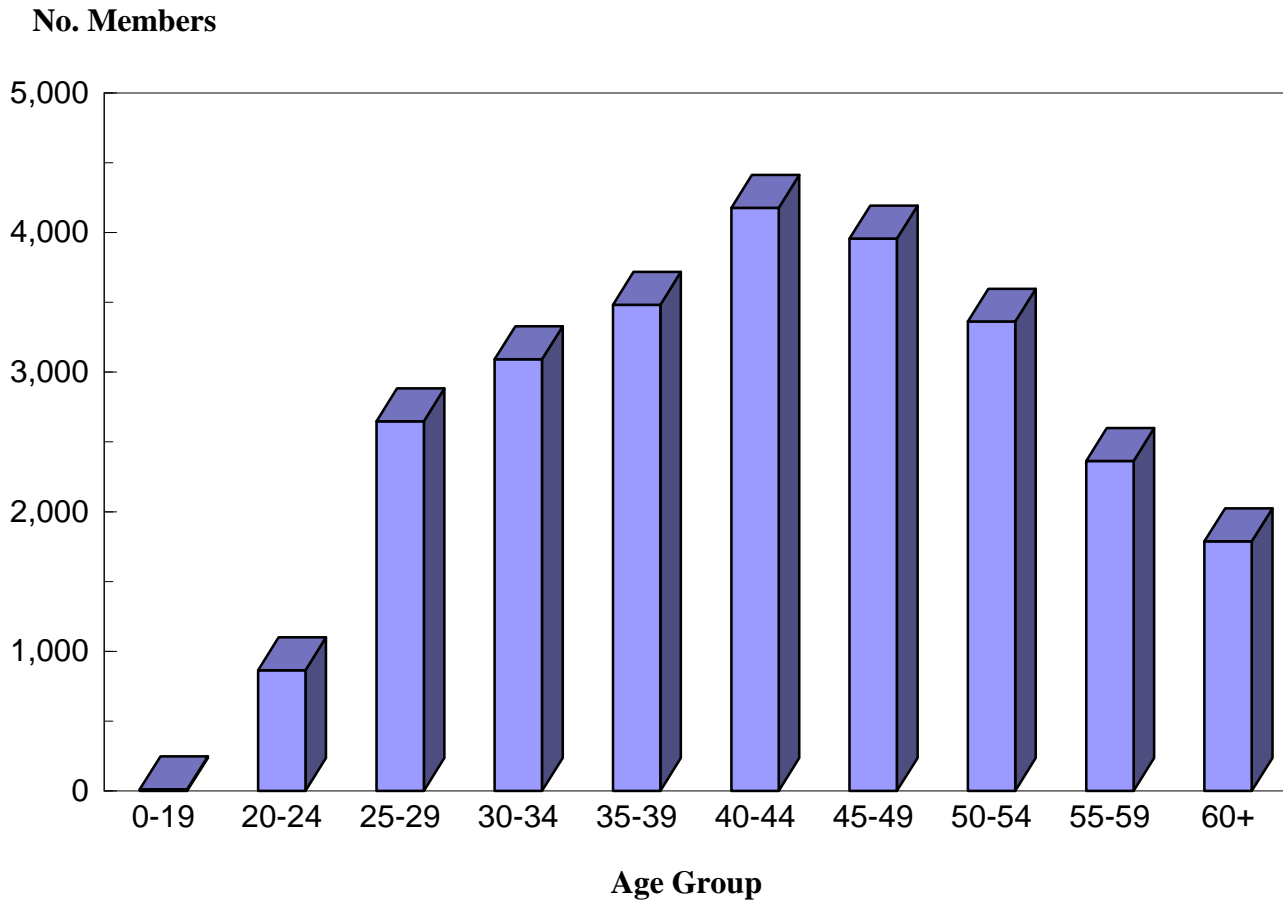
Missouri LAGERS Active Members by Division



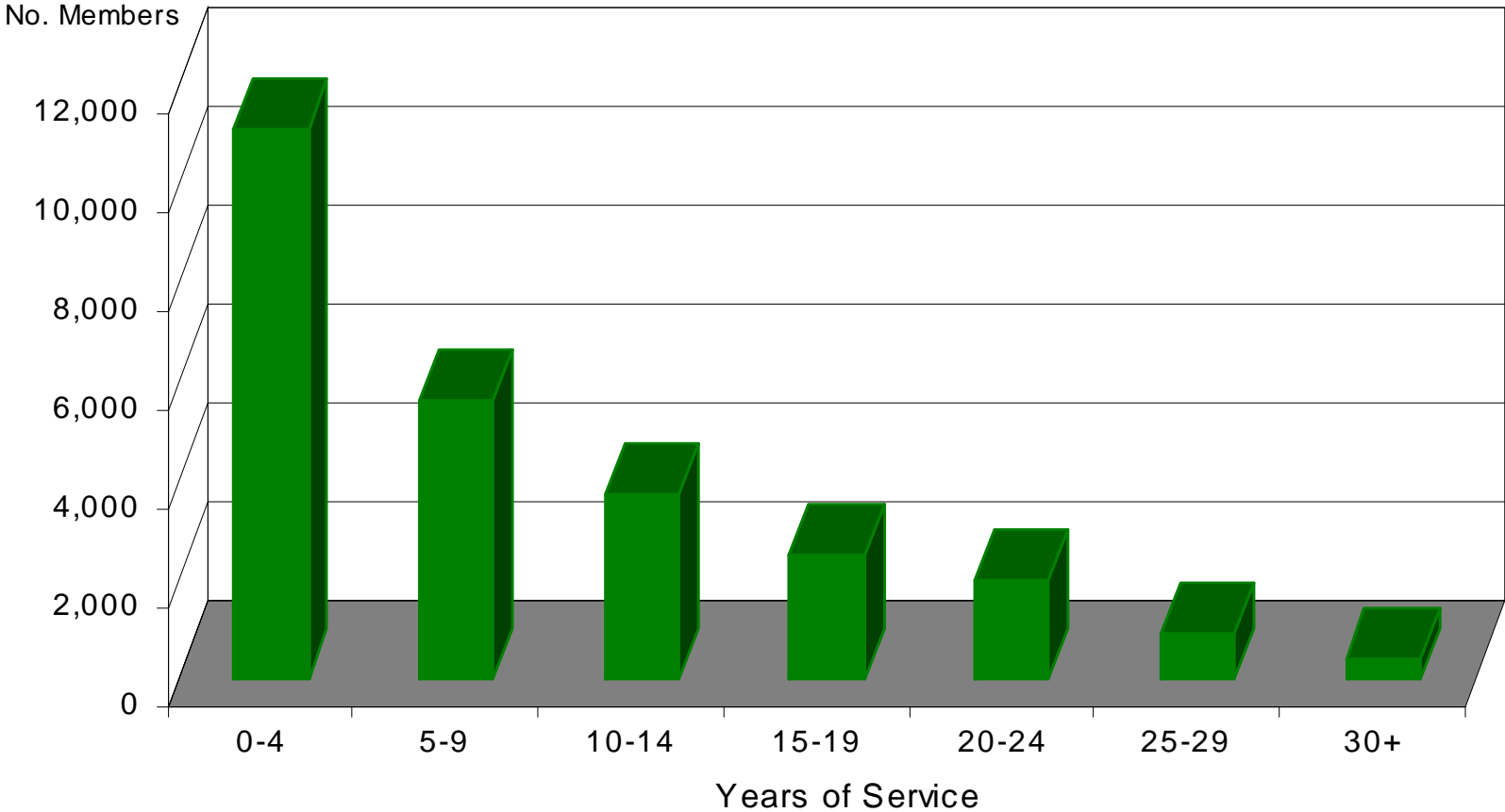
Missouri LAGERS Annual Payroll by Division



**Missouri LAGERS
Distribution of Active Members
By Age
February 28, 2001**



Missouri LAGERS
Distribution of Active Members
By Service
February 28, 2001



GENERAL MEMBERS
MEN Active Members February 28, 2001
By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	8							8	\$ 144,906
20-24	398	6						404	8,842,312
25-29	648	148	1					797	20,965,530
30-34	673	347	123	4				1,147	34,656,615
35-39	615	388	320	149	7			1,479	46,721,434
40-44	646	398	315	297	265	15		1,936	64,158,820
45-49	514	369	307	276	359	131	6	1,962	70,004,874
50-54	376	313	243	219	246	195	63	1,655	61,052,249
55-59	280	198	202	166	149	109	90	1,194	40,759,474
60	42	31	33	23	33	15	19	196	6,732,973
61	35	29	37	25	18	10	23	177	5,776,548
62	40	26	28	18	11	12	16	151	4,474,715
63	26	28	14	15	7	6	10	106	3,740,286
64	15	18	17	11	11	4	9	85	2,627,441
65	10	12	18	10	7	2	10	69	2,317,360
66	11	7	9	4	4		3	38	1,372,488
67	7	11	6	5	2		1	32	988,600
68	7	7	8		3	1	3	29	943,162
69	5	5	4	5	1		2	22	569,487
70 & Over	15	16	18	23	5	2	10	89	2,484,872
Totals	4,371	2,357	1,703	1,250	1,128	502	265	11,576	\$379,334,146

While not used in the financial computations, the following *group averages* are computed and shown because of their general interest.

Age: 44.4 years
Service: 10.2 years
Annual Pay: \$32,769

GENERAL MEMBERS
WOMEN Active Members February 28, 2001
By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	5							5	\$ 74,370
20-24	322	4						326	6,295,997
25-29	542	118	5					665	15,433,417
30-34	596	253	75	2				926	23,410,388
35-39	564	280	171	58	1			1,074	27,454,287
40-44	653	353	209	116	94	4		1,429	37,436,038
45-49	573	362	241	132	112	41	4	1,465	40,148,368
50-54	432	310	229	134	104	66	23	1,298	34,278,302
55-59	240	203	181	126	85	37	26	898	23,714,730
60	39	34	34	13	20	5	7	152	3,844,181
61	37	31	15	14	12	7	6	122	3,094,418
62	15	16	13	21	14	8	3	90	2,272,478
63	25	17	10	12	8	9	3	84	2,192,680
64	10	8	6	6	9	4	2	45	1,108,720
65	10	13	10	6	2	3	9	53	1,519,103
66	6	11	12	10	1	5	2	47	1,274,655
67	4	3	6	3	4	3	1	24	642,740
68	2	9	3	4	2	1		21	366,738
69	3	3	2	1	4	2		15	367,354
70 & Over	10	12	8	6	6	3	9	54	1,191,838
Totals	4,088	2,040	1,230	664	478	198	95	8,793	\$226,120,802

While not used in the financial computations, the following *group averages* are computed and shown because of their general interest.

Age: 44.1 years
Service: 8.0 years
Annual Pay: \$25,716

POLICE Active Members February 28, 2001
By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	219							219	\$ 5,174,837
25-29	759	98						857	24,113,448
30-34	557	360	47					964	29,494,567
35-39	231	179	185	47				642	21,323,140
40-44	146	116	144	145	39			590	20,869,765
45-49	129	99	96	103	123	24		574	21,315,021
50-54	92	75	66	70	66	67	13	449	16,241,004
55-59	66	48	59	34	21	27	19	274	9,468,326
60	9	5	5	9	4	1	2	35	1,048,168
61	6	6	5	7	3	4	1	32	1,039,276
62	7	7	7	1	3		4	29	881,887
63	2	4	4	3	1		1	15	446,925
64		3		4	1		2	10	323,555
65	1	3	2					6	131,176
66	2	2	1	1	1			7	175,859
67		2	1	2				5	123,950
68			1					1	22,890
69	2	1						3	59,610
70 & Over	2	1	4				1	8	235,288
Totals	2,230	1,009	627	426	262	123	43	4,720	\$152,488,692

While not used in the financial computations, the following *group averages* are computed and shown because of their general interest.

Age: 38.8 years
Service: 8.0 years
Annual Pay: \$32,307

**FIRE Active Members February 28, 2001
By Attained Age and Years of Service**

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	42							42	\$ 1,135,714
25-29	132	26	1					159	4,860,349
30-34	139	85	25					249	8,546,392
35-39	52	72	79	22	1			226	8,581,080
40-44	17	31	59	79	26			212	8,506,176
45-49	12	24	31	49	66	31		213	9,230,284
50-54	3	14	10	19	38	58	14	156	6,839,571
55-59	4	5	2	4	10	19	13	57	2,561,010
60		1			2		3	6	225,270
61	1		1	1	2		1	6	261,304
62					2			2	62,737
63			1		1			2	75,530
64							1	1	27,197
65							1	1	34,916
67	1							1	31,318
70 & Over						1		1	36,617
Totals	403	258	209	174	148	109	33	1,334	\$51,015,465

While not used in the financial computations, the following *group averages* are computed and shown because of their general interest.

Age: 39.8 years
Service: 11.9 years
Annual Pay: \$38,242

Participating Employers and Members in Valuations 10 Year Comparative Statement

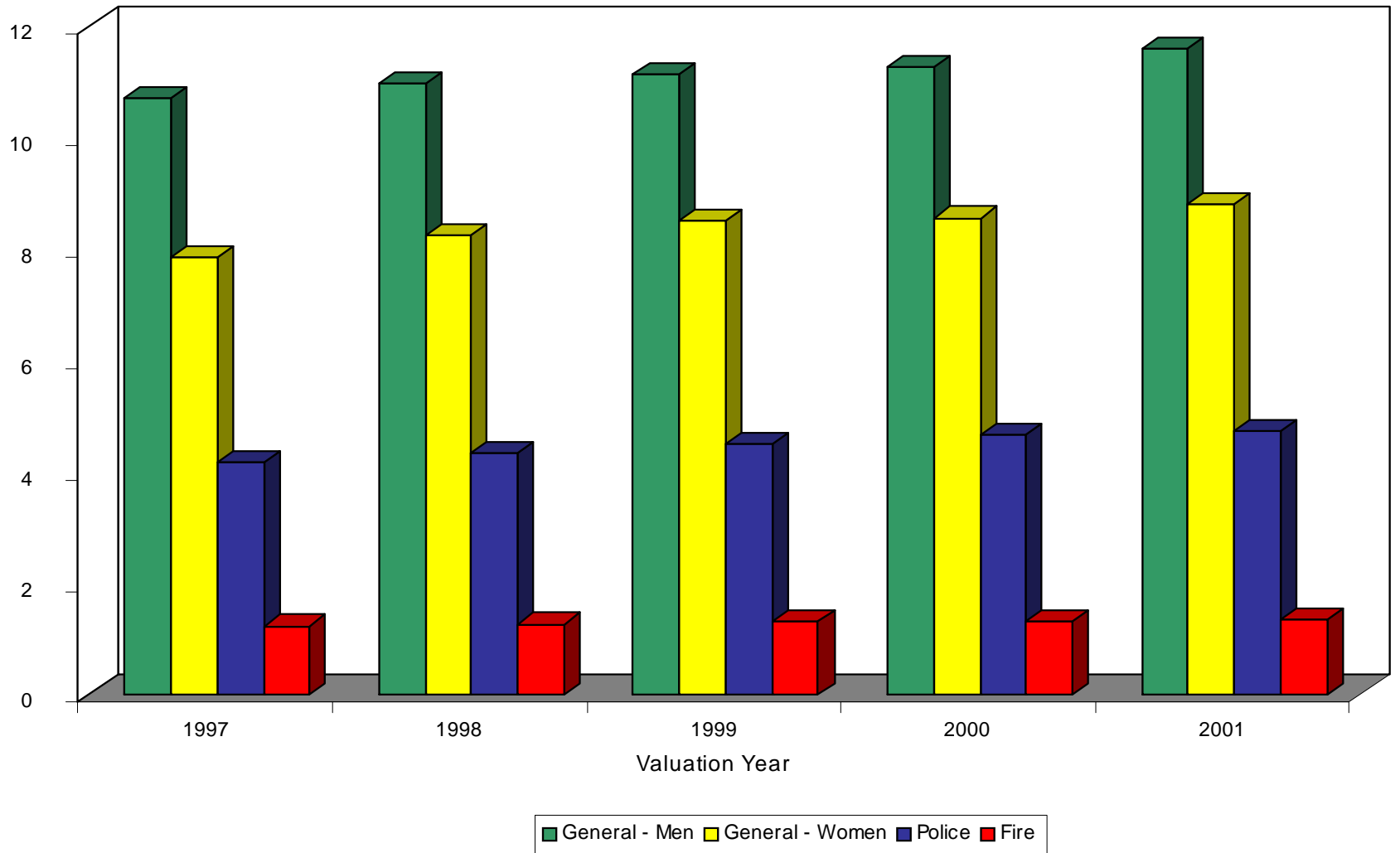
Valuation Date	Number of		Active Members				Inflation Increase % (C.P.I.)	
	Participating Employers	Valuation Groups	Number	Annual Payroll	Average Pay	% Increase		
2-29-92	360	626	20,272	\$457,014,761	\$22,544	3.7%	2.8%	
2-28-93	369	634	20,580	472,928,628	22,980	1.9	3.3	
2-28-94	371	645	21,339	505,208,639	23,675	3.0	2.5	
2-28-95	376	655	21,984	534,173,422	24,298	2.6	2.9	
2-29-96	384	665	23,000	581,120,176	25,266	4.0	2.7	
2-28-97	398	686	23,924	627,184,823	26,216	3.8	3.0	
2-28-98	415	711	24,767	667,085,761	26,934	2.7	1.4	
2-28-99	432	731	25,391	716,154,828	28,205	4.7	1.6	
2-29-00	443	747	25,747	757,753,142	29,431	4.3	3.2	
2-28-01	463	777	26,423	808,959,105	30,616	4.0	3.5	
			10 Year Compound Average				3.5	2.7

Active Members in Valuations - Group Averages
 (averages not used in valuations; computed and shown because of general information value)

Employee Type	Valuation at 2-28	No. of Members	----- Group Averages -----		Annual Payroll		Inflation
			Completed Years Age	Service	Average	Change	Increase % (C.P.I)
General - Men	1992	9,585	42.7	9.7	24,279	+3.4	+2.8
	1993	9,690	42.9	10.0	24,625	+1.4	+3.3
	1994	9,882	43.2	10.2	25,542	+3.7	+2.5
	1995	10,068	43.2	10.1	26,190	+2.5	+2.9
	1996	10,398	43.4	10.1	27,310	+4.3	+2.7
	1997	10,694	43.5	10.1	28,327	+3.7	+3.0
	1998	10,955	43.8	10.2	28,943	+2.2	+1.4
	1999	11,109	44.0	10.3	30,325	+4.8	+1.6
	2000	11,250	44.2	10.2	31,583	+4.1	+3.2
	2001	11,576	44.4	10.2	32,769	+3.8	+3.5
General - Women	1992	6,106	42.8	7.7	18,355	+4.2	+2.8
	1993	6,346	43.1	7.9	18,827	+2.6	+3.3
	1994	6,632	43.1	8.0	19,477	+3.5	+2.5
	1995	6,935	43.2	7.9	20,156	+3.5	+2.9
	1996	7,413	43.0	7.8	20,984	+4.1	+2.7
	1997	7,834	43.1	7.8	21,730	+3.6	+3.0
	1998	8,227	43.2	7.8	22,412	+3.1	+1.4
	1999	8,491	43.3	7.9	23,406	+4.4	+1.6
	2000	8,543	43.7	8.0	24,551	+4.9	+3.2
	2001	8,793	44.1	8.0	25,716	+4.7	+3.5
Police	1992	3,537	38.9	7.1	23,398	+3.5	+2.8
	1993	3,487	39.0	7.5	23,992	+2.5	+3.3
	1994	3,714	39.0	7.6	24,425	+1.8	+2.5
	1995	3,831	38.9	7.6	25,049	+2.6	+2.9
	1996	4,049	38.8	7.6	26,006	+3.8	+2.7
	1997	4,173	38.7	7.8	27,318	+5.0	+3.0
	1998	4,330	38.7	7.8	28,545	+4.5	+1.4
	1999	4,492	38.6	7.9	29,926	+4.8	+1.6
	2000	4,654	38.8	8.0	30,996	+3.6	+3.2
	2001	4,720	38.8	8.0	32,307	+4.2	+3.5
Fire	1992	1,044	38.6	11.4	28,222	+5.4	+2.8
	1993	1,057	39.1	11.9	29,493	+4.5	+3.3
	1994	1,111	39.1	11.4	29,629	+0.5	+2.5
	1995	1,150	39.2	11.4	30,215	+2.0	+2.9
	1996	1,140	39.6	11.8	31,840	+5.4	+2.7
	1997	1,223	39.5	11.7	32,729	+2.8	+3.0
	1998	1,255	39.4	11.7	33,491	+2.3	+1.4
	1999	1,299	39.6	11.7	35,490	+6.0	+1.6
	2000	1,300	39.6	11.8	37,275	+5.0	+3.2
	2001	1,334	39.8	11.9	38,242	+2.6	+3.5

Missouri LAGERS Active Members 1997 - 2001

Members (Thousands)



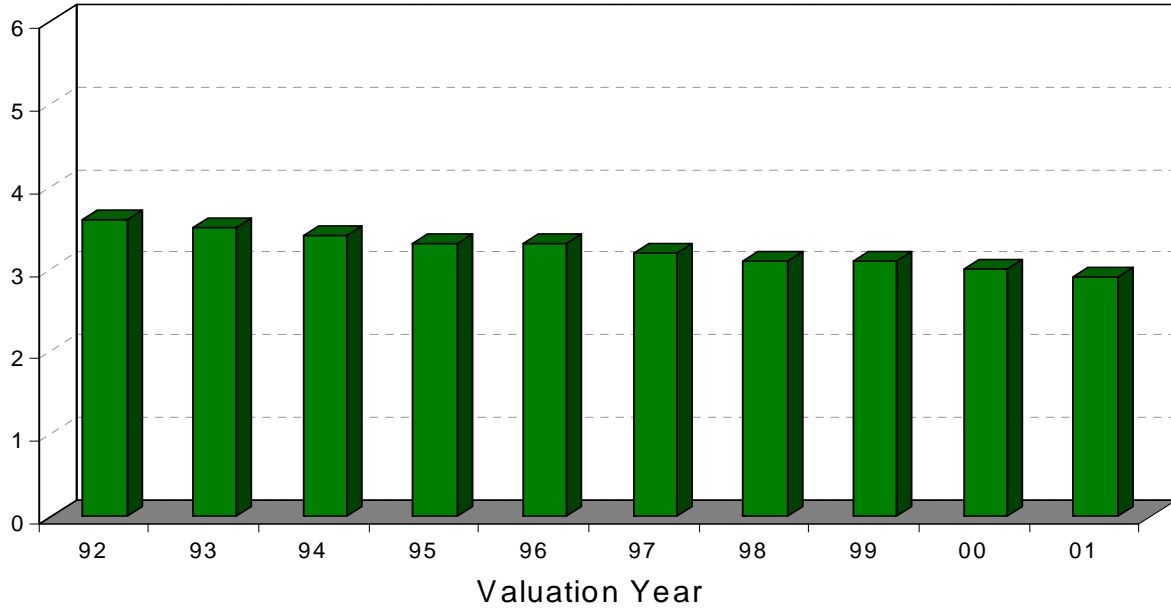
Retirants and Beneficiaries Added to and Removed from Rolls 10 Year Comparative Statement

Year Ended	Added to Rolls		Removed from Rolls		Rolls End of Year		% Incr. in Annual Allowances	Retired Lives in Relation to Active Members	
	No.	Annual Allowances*	No.	Annual Allowances	No.	Annual Allowances		Active Members Per Beneficiary	Allowances as Percents of Active Payroll
2-29-92	542	\$3,157,724	271	\$ 918,390	5,645	\$19,573,710	12.9%	3.6	4.3%
2-28-93	528	3,220,394	220	643,464	5,953	22,150,640	13.2	3.5	4.7
2-28-94	544	3,500,340	293	930,039	6,204	24,720,941	11.6	3.4	4.9
2-28-95	712	5,075,916	282	1,197,176	6,634	28,599,681	15.7	3.3	5.4
2-29-96	653	4,764,570	246	1,022,382	7,041	32,341,869	13.1	3.3	5.6
2-28-97	695	5,656,604	275	1,239,056	7,461	36,759,417	13.7	3.2	5.9
2-28-98	741	6,251,387	315	1,411,336	7,887	41,599,468	13.2	3.1	6.2
2-28-99	748	6,620,521	339	1,854,143	8,296	46,365,846	11.5	3.1	6.5
2-29-00	769	7,394,519	371	1,839,075	8,694	51,921,290	12.0	3.0	6.9
2-28-01	816	8,094,550	330	2,026,823	9,180	57,989,017	11.7	2.9	7.2

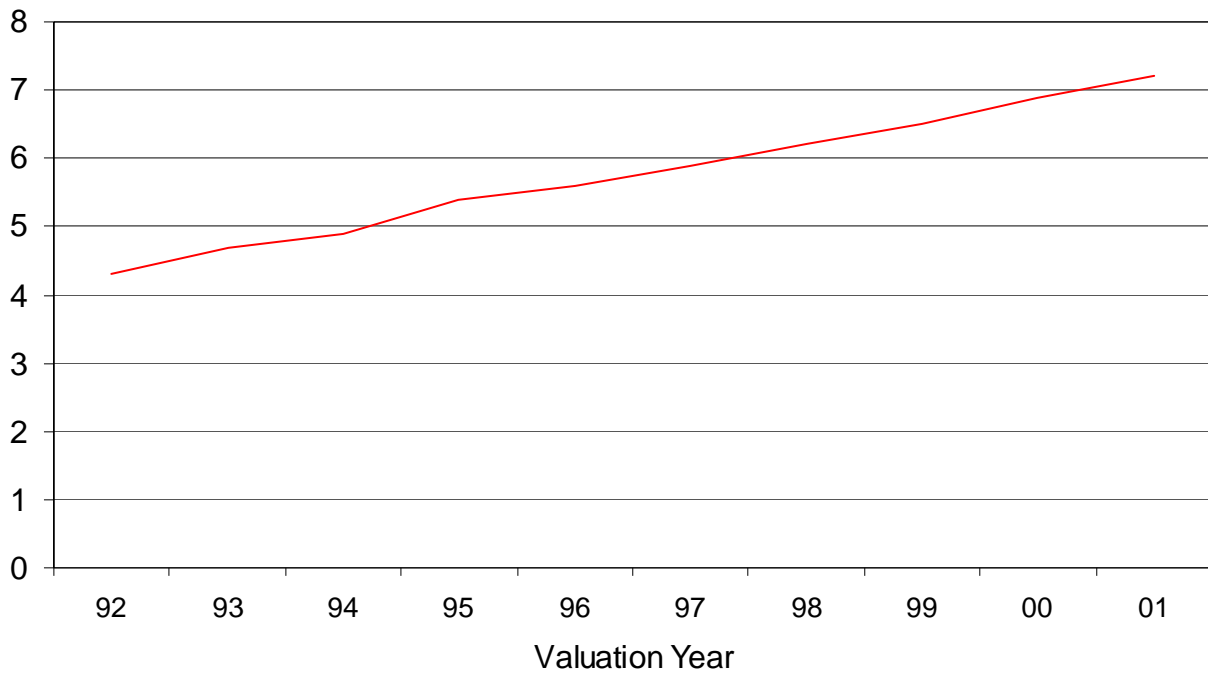
* Includes post-retirement adjustments.

Retirants and Beneficiaries Comparative Data

Active Members Per Benefit Recipient



Allowances as % of Active Pay



**Retirants and Beneficiaries on Rolls February 28, 2001
By Disbursing Fund and Type of Benefit Being Paid**

Type of Benefit	Number	Annual Allowances
Service Early & Deferred		
Life Option	4,478	\$27,914,389
Option A	1,193	9,000,443
Option B	769	7,701,936
Option C	709	3,976,436
Beneficiary Receiving	<u>732</u>	<u>2,551,999</u>
Totals	7,881	51,145,203
Duty Disability		
Life Option	185	1,788,004
Option A	71	593,204
Option B	28	257,073
Option C	<u>12</u>	<u>96,191</u>
Totals	296	2,734,472
Non-Duty Disability		
Life Option	188	975,095
Option A	73	402,813
Option B	34	234,189
Option C	<u>42</u>	<u>271,911</u>
Totals	337	1,884,008
Beneficiary receiving	<u>137</u>	<u>487,896</u>
Total Disability	770	5,106,376
Death-In-Service		
Spouse Receiving	491	1,676,913
Children Receiving	<u>38</u>	<u>60,525</u>
Totals	529	1,737,438
Totals	9,180	\$57,989,017

Section G

Computed Employer Contributions: Summary of Computed Employer Contribution Rates

**Computed Employer Contributions: Non-Contributory Plans
5 Year Final Average Salary
By Valuation Groups February 28, 2001**

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program L-1									
General:	1-9	8	2	7	2		2	1	22
	10-49	6		3	1	2			12
	50 & up	4	—	1	—	—	—	—	5
	Totals	18	2	11	3	2	2	1	39
Police:	1-9	4	6	1	2				13
	10-49	4	2		2				8
	50 & up	—	—	—	—				—
	Totals	8	8	1	4				21
Fire:	1-9			1					1
	10-49	4							4
	50 & up	—		—					—
	Totals	4		1					5
Totals:		30	10	13	7	2	2	1	65
Benefit Program L-3									
General:	1-9	7	1	2			2		12
	10-49	6	2	5	3	1			17
	50 & up	6	1	1	—	—	—		8
	Totals	19	4	8	3	1	2		37
Police:	1-9	5	1	2	1			1	10
	10-49	11	1	1		1			14
	50 & up	—	—	—	—	—		—	—
	Totals	16	2	3	1	1		1	24
Fire:	1-9	1			1				2
	10-49	4							4
	50 & up	—		1	—				1
	Totals	5		1	1				7
Totals		40	6	12	5	2	2	1	68

* Dollar contribution rates for groups presently without active members.

Computed Employer Contributions: Non-Contributory Plans
5 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program LT-4 (62 or 65)									
General:	1-9					1			1
	10-49					—			—
	50 & up					—			—
	Totals					1			1
Police:	1-9				1				1
	10-49								
	50 & up				—				—
	Totals				1				1
Fire:	1-9								
	10-49								
	50 & up								
	Totals								0
Totals:				1	1				2
Benefit Program LT-5 (62 or 65)									
General:	1-9		1		1				2
	10-49			2	2				4
	50 & up	<u>1</u>	<u>1</u>	—	—		<u>1</u>		<u>3</u>
	Totals	1	2	2	3		1		9
Police:	1-9								
	10-49			3		1			4
	50 & up			—		—			—
	Totals			3		1			4
Fire:	1-9						1		1
	10-49					1			1
	50 & up					—	—		—
	Totals					1	1		2
Totals		1	2	5	3	2	2		15

* Dollar contribution rates for groups presently without active members.

The above totals include both the LT(62) and LT(65) benefit programs. Of the 2 LT-4 benefit programs, 0 are LT-4(62) and 2 are LT-4(65). Of the 15 LT-5 benefit programs, 0 are LT-5(62) and 15 are LT-5(65).

Computed Employer Contributions: Non-Contributory Plans
5 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program L-6									
General:	1-9						1		1
	10-49								
	50 & up					$\frac{1}{1}$	$\frac{1}{2}$		$\frac{2}{3}$
	Totals					1	2		3
Police:	1-9								
	10-49								
	50 & up					$\frac{1}{1}$	$\frac{1}{1}$		$\frac{2}{2}$
	Totals					1	1		2
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals:					2	3		5	
Benefit Program L-7									
General:	1-9	2	1		1		5		9
	10-49	1	3	3		2	5		14
	50 & up	—	$\frac{2}{2}$	$\frac{3}{3}$	—	$\frac{2}{2}$	—		$\frac{7}{7}$
	Totals	3	6	6	1	4	10		30
Police:	1-9	2		2		1	2	1	8
	10-49	3	2	2	1	2	1		11
	50 & up	—	—	—	—	—	—	—	—
	Totals	5	2	4	1	3	3	1	19
Fire:	1-9								
	10-49	1			2				3
	50 & up	—			—				—
	Totals	1			2				3
Totals	9	8	10	4	7	13	1	52	

** Dollar contribution rates for groups presently without active members.*

Computed Employer Contributions: Non-Contributory Plans
5 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program LT-8 (62 or 65)									
General:	1-9		1			1	1		3
	10-49			1		1			2
	50 & up	<u>1</u>	<u>1</u>	<u>2</u>		—	—		<u>4</u>
	Totals	1	2	3		2	1		9
Police:	1-9	1			1				2
	10-49	1	1						2
	50 & up	—	—		<u>1</u>				<u>1</u>
	Totals	2	1		2				5
Fire:	1-9					1			1
	10-49			1	1				2
	50 & up			—	—	—			—
	Totals			1	1	1			3
Totals:		3	3	4	3	3	1		17
Benefit Program L-9									
General:	1-9	1			1				2
	10-49					2			2
	50 & up	—			—	—			—
	Totals	1			1	2			4
Police:	1-9								
	10-49			1					1
	50 & up			—					—
	Totals			1					1
Fire:	1-9								
	10-49								
	50 & up								
	Totals								0
Totals		1		1	1	2			5

* Dollar contribution rates for groups presently without active members.

The above totals include both the LT(62) and LT(65) benefit programs. Of the 17 LT-8 benefit programs, 5 are LT-8(62) and 12 are LT-8(65).

Computed Employer Contributions: Non-Contributory Plans
5 Year Final Average Salary
By Valuation Groups February 28, 2001
(Concluded)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program LT-10(65)									
General:	1-9	1					1		2
	10-49	1							1
	50 & up	---		$\frac{1}{1}$			---		$\frac{1}{1}$
	Totals	2		$\frac{1}{1}$			1		4
Police:	1-9								
	10-49	1							1
	50 & up	---			$\frac{1}{1}$				$\frac{1}{1}$
	Totals	1			$\frac{1}{1}$				2
Fire:	1-9								
	10-49								
	50 & up			$\frac{1}{1}$					$\frac{1}{1}$
	Totals			$\frac{1}{1}$					1
Totals:		3		2	1		1		7
Benefit Program L-11									
General:	1-9								
	10-49								
	50 & up								---
	Totals								0
Police:	1-9								
	10-49								
	50 & up								---
	Totals								0
Fire:	1-9								
	10-49								
	50 & up								---
	Totals								0
Totals:									0

**Dollar contribution rates for groups presently without active members.*

Computed Employer Contributions: Contributory Plans
5 Year Final Average Salary
By Valuation Groups February 28, 2001

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program L-1									
General:	1-9	15	5	5	2		1	3	31
	10-49	23	4						27
	50 & up	—	—	—	—		—	—	—
	Totals	38	9	5	2		1	3	58
Police:	1-9	18	2	2	2	1		1	26
	10-49	9							9
	50 & up	—	—	—	—	—		—	—
	Totals	27	2	2	2	1		1	35
Fire:	1-9	1			1			1	3
	10-49								
	50 & up	—			—			—	—
	Totals	1			1			1	3
Totals:		66	11	7	5	1	1	5	96
Benefit Program L-3									
General:	1-9	6	1	3	1	2	2		15
	10-49	8	1	2					11
	50 & up	2	—	—	—	—	—		2
	Totals	16	2	5	1	2	2		28
Police:	1-9	4		1				1	6
	10-49	4	1	1					6
	50 & up	—	—	—				—	—
	Totals	8	1	2				1	12
Fire:	1-9	2							2
	10-49								
	50 & up	—							—
	Totals	2							2
Totals		26	3	7	1	2	2	1	42

**Dollar contribution rates for groups presently without active members.*

Computed Employer Contributions: Contributory Plans
5 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program LT-4 (62 or 65)									
General:	1-9								
	10-49								
	50 & up								—
	Totals								0
Police:	1-9								
	10-49								
	50 & up								—
	Totals								0
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals:									0
Benefit Program LT-5 (62 or 65)									
General:	1-9	1							1
	10-49								
	50 & up	—							—
	Totals	1							1
Police:	1-9								
	10-49								
	50 & up								—
	Totals								0
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals		1							1

* Dollar contribution rates for groups presently without active members.

The above totals include both the LT(62) and LT(65) benefit programs. Of the 1 LT-5 benefit program, 1 is LT-5(62) and 0 are LT-5(65).

Computed Employer Contributions: Contributory Plans
5 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program L-6									
General:	1-9								
	10-49	1							1
	50 & up	—	<u>1</u>						<u>1</u>
	Totals	1	1						2
Police:	1-9								
	10-49	2							2
	50 & up	—							—
	Totals	2							2
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals:		3	1						4
Benefit Program L-7									
General:	1-9	1	1	1			1		4
	10-49	3	2	1	1				7
	50 & up	—	—	—	—		—		—
	Totals	4	3	2	1		1		11
Police:	1-9	3	1			1	1		6
	10-49								
	50 & up	—	—			—	—		—
	Totals	3	1			1	1		6
Fire:	1-9			1					1
	10-49								
	50 & up			—					—
	Totals			1					1
Totals		7	4	3	1	1	2		18

* Dollar contribution rates for groups presently without active members.

Computed Employer Contributions: Contributory Plans
5 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program LT-8 (62 or 65)									
General:	1-9				1				3
	10-49	2							
	50 & up	—			—				—
	Totals	2			1				3
Police:	1-9	1		1					2
	10-49								
	50 & up	—		—					—
	Totals	1		1					2
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals:		3		1	1				5
Benefit Program L-9									
General:	1-9	1		1					2
	10-49	2							2
	50 & up	—		$\frac{1}{2}$					$\frac{1}{2}$
	Totals	3		$\frac{1}{2}$					$\frac{1}{2}$
Police:	1-9	1					1		2
	10-49		1						1
	50 & up	—	—				—		—
	Totals	1	1				1		3
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals		4	1	2			1		8

* Dollar contribution rates for groups presently without active members.

The above totals include both the LT(62) and LT(65) benefit programs. Of the 5 LT-8 benefit programs, 2 are LT-8(62) and 3 are LT-8(65).

Computed Employer Contributions: Contributory Plans
5 Year Final Average Salary
By Valuation Groups February 28, 2001
(Concluded)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program LT-10(65)									
General:	1-9				1				1
	10-49								
	50 & up				—				—
	Totals				1				1
Police:	1-9								
	10-49								
	50 & up								—
	Totals								0
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals:				1				1	
Benefit Program L-11									
General:	1-9								
	10-49								
	50 & up								—
	Totals								0
Police:	1-9								
	10-49								
	50 & up								—
	Totals								0
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals:								0	

* Dollar contribution rates for groups presently without active members.

**Computed Employer Contributions: Non-Contributory Plans
3 Year Final Average Salary
By Valuation Groups February 28, 2001**

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program L-1									
General:	1-9	1		1	1		2		5
	10-49	2	2	2	1	1		8	
	50 & up	—	—	—	—	—	—	—	
	Totals	3	2	3	2	1	2	13	
Police:	1-9	2		2		1		5	
	10-49				1			1	
	50 & up	—		—	—	—		—	
	Totals	2		2	1	1		6	
Fire:	1-9		1					1	
	10-49								
	50 & up		—					—	
	Totals		1					1	
Totals:		5	3	5	3	2	2	20	
Benefit Program L-3									
General:	1-9	2			1		5		8
	10-49	3		2			1		6
	50 & up	<u>1</u>	<u>2</u>	—	—		—		<u>3</u>
	Totals	6	2	2	1		6		17
Police:	1-9	2	1	1	1			5	
	10-49	4						4	
	50 & up	—	—	—	—			—	
	Totals	6	1	1	1			9	
Fire:	1-9	1						1	
	10-49	2						2	
	50 & up	—						—	
	Totals	3						3	
Totals		15	3	3	2		6	29	

* Dollar contribution rates for groups presently without active members.

Computed Employer Contributions: Non-Contributory Plans
3 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program LT-4 (62 or 65)									
General:	1-9				1				1
	10-49								
	50 & up				—				—
	Totals				1				1
Police:	1-9						1		1
	10-49								
	50 & up						—		—
	Totals						1		1
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals:				1		1		2	
Benefit Program LT-5 (62 or 65)									
General:	1-9						1		1
	10-49		1	1	2				4
	50 & up	$\frac{2}{2}$	$\frac{1}{2}$	—	—		—		$\frac{3}{8}$
	Totals	2	2	1	2		1		8
Police:	1-9	1					1		2
	10-49	3		1					4
	50 & up	$\frac{2}{6}$		—			—		$\frac{2}{8}$
	Totals	6		1			1		8
Fire:	1-9		1						1
	10-49	1	1						2
	50 & up	—	—	$\frac{1}{1}$					$\frac{1}{4}$
	Totals	1	2	1					4
Totals	9	4	3	2		2		20	

* Dollar contribution rates for groups presently without active members.

The above totals include both the LT(62) and LT(65) benefit programs. Of the 2 LT-4 benefit programs, 0 are LT-4(62) and 2 are LT-4(65). Of the 20 LT-5 benefit programs, 10 are LT-5(62) and 10 are LT-5(65).

Computed Employer Contributions: Non-Contributory Plans
3 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program L-6									
General:	1-9		1				3		4
	10-49								
	50 & up		—			$\frac{1}{1}$	$\frac{4}{7}$		$\frac{5}{9}$
	Totals		1			1	7		9
Police:	1-9					1			1
	10-49								
	50 & up					—	$\frac{2}{2}$		$\frac{2}{3}$
	Totals					1	2		3
Fire:	1-9						2		2
	10-49								
	50 & up						$\frac{1}{3}$		$\frac{1}{3}$
	Totals						3		3
Totals:		1			2	12		15	
Benefit Program L-7									
General:	1-9			1	2	1	6	2	12
	10-49	5	4	1	6	2	2		20
	50 & up	$\frac{4}{9}$	$\frac{8}{12}$	$\frac{5}{7}$	$\frac{3}{11}$	$\frac{3}{6}$	$\frac{1}{9}$	—	$\frac{24}{56}$
	Totals	9	12	7	11	6	9	2	56
Police:	1-9	3			1			1	5
	10-49	3	4	1	3	5			16
	50 & up	$\frac{1}{7}$	$\frac{2}{6}$	$\frac{1}{2}$	$\frac{1}{5}$	—		—	$\frac{5}{26}$
	Totals	7	6	2	5	5		1	26
Fire:	1-9				1		1		2
	10-49	1			1		1		3
	50 & up	—			—		—		—
	Totals	1			2		2		5
Totals		17	18	9	18	11	11	3	87

* Dollar contribution rates for groups presently without active members.

Computed Employer Contributions: Non-Contributory Plans
3 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							Totals
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	
Benefit Program LT-8 (62 or 65)									
General:	1-9						1		1
	10-49	2	1	1	2		3		9
	50 & up	—	<u>3</u>	<u>3</u>	<u>2</u>		<u>1</u>		<u>9</u>
	Totals	2	4	4	4		5		19
Police:	1-9	1				1	2	1	5
	10-49	3	2						5
	50 & up	<u>1</u>	<u>1</u>			<u>1</u>	—	—	<u>3</u>
	Totals	5	3			2	2	1	13
Fire:	1-9			1			1		2
	10-49		2		1		1		4
	50 & up	<u>1</u>	—	—	—	<u>1</u>	—		<u>2</u>
	Totals	1	2	1	1	1	2		8
Totals:		8	9	5	5	3	9	1	40
Benefit Program L-9									
General:	1-9						1		1
	10-49		2			2	1		5
	50 & up	<u>1</u>	—	<u>1</u>	<u>2</u>	<u>1</u>	—		<u>5</u>
	Totals	1	2	1	2	3	2		11
Police:	1-9	1			2		1		4
	10-49	1	1		1				3
	50 & up	—	—		<u>1</u>	<u>1</u>	—		<u>2</u>
	Totals	2	1		4	1	1		9
Fire:	1-9			1					1
	10-49								
	50 & up			—					—
	Totals			1					1
Totals		3	3	2	6	4	3		21

* Dollar contribution rates for groups presently without active members.

The above totals include both the LT(62) and LT(65) benefit programs. Of the 40 LT-8 benefit programs, 11 are LT-8(62) and 29 are LT-8(65).

Computed Employer Contributions: Non-Contributory Plans
3 Year Final Average Salary
By Valuation Groups February 28, 2001
(Concluded)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program LT-10(65)									
General:	1-9						2		2
	10-49			3	1	1	1		6
	50 & up	<u>1</u>		<u>1</u>	<u>1</u>	<u>3</u>	—		<u>6</u>
	Totals	1		4	2	4	3		14
Police:	1-9	2							2
	10-49		2	3		1			6
	50 & up	—	—	—		—			—
	Totals	2	2	3		1			8
Fire:	1-9	1							1
	10-49					1	1		2
	50 & up	—				—	—		—
	Totals	1				1	1		3
Totals:		4	2	7	2	6	4		25
Benefit Program L-11									
General:	1-9								
	10-49								
	50 & up								—
	Totals								0
Police:	1-9								
	10-49								
	50 & up								—
	Totals								0
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals:									0

* Dollar contribution rates for groups presently without active members.

**Computed Employer Contributions: Contributory Plans
3 Year Final Average Salary
By Valuation Groups February 28, 2001**

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program L-1									
General:	1-9	6	5	2	2			1	16
	10-49		1						1
	50 & up	—	—	—	—			—	—
	Totals	6	6	2	2			1	17
Police:	1-9	2	1						3
	10-49	1							1
	50 & up	—	—						—
	Totals	3	1						4
Fire:	1-9		1						1
	10-49								
	50 & up		—						—
	Totals		1						1
Totals:		9	8	2	2			1	22
Benefit Program L-3									
General:	1-9	4		2	1	1			8
	10-49	8	1		1				10
	50 & up	—	—	—	—	—			—
	Totals	12	1	2	2	1			18
Police:	1-9	2							2
	10-49	2		1					3
	50 & up	—		—					—
	Totals	4		1					5
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals		16	1	3	2	1			23

* Dollar contribution rates for groups presently without active members.

Computed Employer Contributions: Contributory Plans
3 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program LT-4 (62 or 65)									
General:	1-9								
	10-49								
	50 & up								—
	Totals								0
Police:	1-9								
	10-49								
	50 & up								—
	Totals								0
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals:									0
Benefit Program LT-5 (62 or 65)									
General:	1-9								
	10-49		1						1
	50 & up		—						—
	Totals		1						1
Police:	1-9								
	10-49			1					1
	50 & up			—					—
	Totals			1					1
Fire:	1-9					1			1
	10-49								
	50 & up					—			—
	Totals					1			1
Totals		1	1		1			3	

* Dollar contribution rates for groups presently without active members.

The above totals include both the LT(62) and LT(65) benefit programs. Of the 3 LT-5 benefit program, 0 are LT-5(62) and 3 are LT-5(65).

Computed Employer Contributions: Contributory Plans
3 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							Totals
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	
Benefit Program L-6									
General:	1-9							2	2
	10-49						1		1
	50 & up	<u>1</u>			<u>1</u>		<u>—</u>	<u>—</u>	<u>2</u>
	Totals	1			1		1	2	5
Police:	1-9								
	10-49	2							2
	50 & up	<u>—</u>							<u>—</u>
	Totals	2							2
Fire:	1-9								
	10-49								
	50 & up								<u>—</u>
	Totals								0
Totals:		3			1		1	2	7
Benefit Program L-7									
General:	1-9	4	2	2		1	2		11
	10-49	8	1	1	1				11
	50 & up	<u>5</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>		<u>5</u>
	Totals	17	3	3	1	1	2		27
Police:	1-9	5		1				1	7
	10-49	5	1						6
	50 & up	<u>1</u>	<u>—</u>	<u>—</u>				<u>—</u>	<u>1</u>
	Totals	11	1	1				1	14
Fire:	1-9							1	1
	10-49								
	50 & up							<u>—</u>	<u>—</u>
	Totals							1	1
Totals		28	4	4	1	1	2	2	42

* Dollar contribution rates for groups presently without active members.

Computed Employer Contributions: Contributory Plans
3 Year Final Average Salary
By Valuation Groups February 28, 2001
(Continued)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program LT-8 (62 or 65)									
General:	1-9			1		1			2
	10-49	3							3
	50 & up	$\frac{1}{1}$		—		—			$\frac{1}{1}$
	Totals	4		1		1			6
Police:	1-9	1							1
	10-49	2							2
	50 & up	—							—
	Totals	3							3
Fire:	1-9								
	10-49	1							1
	50 & up	—							—
	Totals	1							1
Totals:		8		1		1			10
Benefit Program L-9									
General:	1-9	1							1
	10-49	1							1
	50 & up	$\frac{1}{1}$	$\frac{1}{1}$			$\frac{1}{1}$			$\frac{3}{1}$
	Totals	3	1			1			5
Police:	1-9	2							2
	10-49	2	1						3
	50 & up	—	—						—
	Totals	4	1						5
Fire:	1-9								
	10-49			1					1
	50 & up			—					—
	Totals			1					1
Totals		7	2	1	1				11

* Dollar contribution rates for groups presently without active members.

The above totals include both the LT(62) and LT(65) benefit programs. Of the 10 LT-8 benefit programs, 5 are LT-8(62) and 5 are LT-8(65).

Computed Employer Contributions: Contributory Plans
3 Year Final Average Salary
By Valuation Groups February 28, 2001
(Concluded)

Group	Number of Active Members	Number of Valuation Groups with Indicated Computed Employer Contributions Expressed as Percents of Active Member Payroll							
		Under 5.00%	5.00% -6.99%	7.00% -8.99%	9.00% -10.99	11.00% -12.99	Over 12.99%	Other*	Totals
Benefit Program LT-10(65)									
General:	1-9				2				2
	10-49	2							2
	50 & up	<u>1</u>			—				<u>1</u>
	Totals	3			2				5
Police:	1-9	1			1				2
	10-49	1							1
	50 & up	—			—				—
	Totals	2			1				3
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals:		5			3				8
Benefit Program L-11									
General:	1-9								
	10-49								
	50 & up								—
	Totals								0
Police:	1-9								
	10-49								
	50 & up								—
	Totals								0
Fire:	1-9								
	10-49								
	50 & up								—
	Totals								0
Totals:									0

* Dollar contribution rates for groups presently without active members.

Section H

Appendix

**SUMMARY OF
ASSUMPTIONS USED FOR LAGERS ACTUARIAL VALUATIONS
Assumptions Adopted by LAGERS Board after Consulting with Actuary**

The actuarial assumptions used in making the valuations are shown in this Appendix of the report.

ECONOMIC ASSUMPTIONS -----

The investment return rate used in making the valuations was 7.5% per year, compounded annually (net after administrative expenses). The real rate of return is the portion of total investment return which is more than the inflation rate. Considering inflation recognition of 4%, the 7.5% investment return rate translates to an assumed real rate of return of 3.5%. Adopted 2001.

Pay increase assumptions for individual active members are shown for sample ages on pages H-4 and H-5. Part of the assumption for each age is for merit and/or seniority increase, and the other 4% recognizes inflation. Adopted 2001.

The active member payroll is assumed to increase 4% annually, which is the portion of the individual pay increase assumptions attributable to inflation. Adopted 1987.

Post-retirement increases are assumed to be 2.88%, compounded annually.

The number of active members per employer is assumed to continue at the present number. Adopted 1967.

NON-ECONOMIC ASSUMPTIONS -----

The mortality table, for post-retirement mortality, used in evaluating allowances to be paid was the 1971 Group Annuity Mortality Table projected to 2000, set back 1 year for men and 7 years for women. The disability post-retirement rates were equal to the standard rates set forward 10 years. Related values are shown on page H-3. Adopted 2001.

The probabilities of age and service retirement are shown on page H-3. Adopted 2001.

The probabilities of withdrawal from service and death in service are shown for sample ages on pages H-4 and H-5. It is assumed that all contributory members terminating before age 40 or with less than 10 years service, and a percentage (General: 30%, Police-Fire: 20%) of contributory members terminating after age 40 with 10 or more years service, withdraw their contributions and forfeit any vested employer-financed benefit. Adopted 2001.

An individual entry age actuarial cost method of valuation was used in determining age & service allowance normal costs and the allocation of actuarial present values between service rendered before and after the valuation date. The entry-age actuarial cost method has the following characteristics:

- (i) the annual normal costs for each individual active member, payable from the member's actual date of employment to the member's projected date of retirement are sufficient to accumulate the actuarial present value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Unfunded accrued liabilities are amortized by level (principal & interest) percent of payroll contributions. Except for amortization of the liabilities associated with the Non-Contributory Refund provision, the minimum amortization period is 15 years. Adopted 1987.

Contribution rates for disability retirement are determined using a modified terminal funding method. Contribution rates are periodically adjusted based on the trend of the balance of the Casualty Reserve Fund (CRF). The funding objective is to have assets in the CRF sufficient to cover the future liabilities for disability retired lives. Adopted 1967.

Future service credit is always assumed to accrue at the rate of 1 year of credit every 12 calendar months. Lower service accrual rates (service breaks or less-than-full-time employment) or higher service accrual rates (addition of military credit or reinstatement of prior service) are reflected as they are reported. Any lower or higher accrual rates may result in small financial gains or losses when reported. Adopted 1967.

The form of benefit payment assumed in the valuation is the Life Option. However, for members with accumulated member contributions, the residual refund available upon an early death after retirement is approximated by assuming pension payments are made for at least 3 years. Adopted 1967.

Employer contribution dollars were assumed to be **paid in equal installments** throughout the employer fiscal year. Adopted 1967.

Present assets (cash & investments) were used based on a smoothed market value (refer to section D). Adopted 1995.

The data about persons now covered and about present assets were furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (M.A.A.A.).

Single Life Retirement Values
(1971 Group Annuity Mortality Table projected to 2000,
setback 1 year for men and 7 years for women, & i = .075)

Sample Attained Ages	Present Value of \$1.00 Monthly Increasing for Life		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	\$185.35	\$202.23	29.17	34.67
55	169.49	188.33	24.82	30.06
60	151.82	172.80	20.70	25.67
65	132.52	155.51	16.82	21.50
70	112.72	136.48	13.32	17.57
75	94.11	116.64	10.36	13.99
80	76.88	97.74	7.83	10.91

Percent of Eligible Active Members Retiring within the Next Year

Ages	Without Rule of 80 Eligibility				With Rule of 80 Eligibility			
	General*		Police*	Fire*	General		Police	Fire
	Men	Women			Men	Women		
50			3%	4%	25%	25%	25%	25%
51			3	4	15	15	25	25
52			3	4	15	15	25	25
53			3	4	15	15	25	25
54			3	4	15	15	25	25
55	2%	4%	15	20%	15	15	25	25
56	2	4	10	20	15	15	25	25
57	2	4	10	15	15	15	15	10
58	2	4	10	15	15	15	25	15
59	2	4	10	15	15	15	20	10
60	10	10	10	20	25	30	20	20
61	10	10	10	20	25	20	25	15
62	35	20	35	40	35	25	30	45
63	25	20	30	40	35	20	25	35
64	25	20	35	35	35	35	50	70
65	40	30	100	100	35	50	100	100
66	30	25			35	35		
67	30	20			35	30		
68	20	25			25	25		
69	25	25			35	50		
70	100	100			100	100		

* First 5 years of retirement pattern only apply to early retirement.

GENERAL - MEN
Separations from Active Employment Before Age & Service Retirement
& Individual Pay Increase Assumptions

Sample Ages	Years of Service	Percent of Active Members Separating within the Next Year		Pay Increase Assumptions for an Individual Employee		
		Death	Other	Merit & Seniority	Base (Economy)	Increase Next Year
ALL	0		21.00%			
	1		16.00			
	2		12.00			
	3		11.00			
	4		10.00			
25	5 & Over	0.05%	8.40	3.9%	4%	7.9%
30		0.06	7.00	2.9	4	6.9
35		0.09	5.60	2.0	4	6.0
40		0.12	4.40	1.6	4	5.6
45		0.22	3.60	1.2	4	5.2
50		0.39	3.10	1.0	4	5.0
55		0.61	2.30	0.8	4	4.8
60		0.92	1.20	0.5	4	4.5
65	1.56	0.00	0.0	4	4.0	

GENERAL - WOMEN
Separations from Active Employment Before Age & Service Retirement
& Individual Pay Increase Assumptions

Sample Ages	Years of Service	Percent of Active Members Separating within the Next Year		Pay Increase Assumptions for an Individual Employee		
		Death	Other	Merit & Seniority	Base (Economy)	Increase Next Year
ALL	0		23.00%			
	1		20.00			
	2		16.00			
	3		14.00			
	4		12.00			
25	5 & Over	0.03%	11.10	3.9%	4%	7.9%
30		0.03	9.60	2.9	4	6.9
35		0.05	8.10	2.0	4	6.0
40		0.07	7.00	1.6	4	5.6
45		0.10	5.70	1.2	4	5.2
50		0.16	4.90	1.0	4	5.0
55		0.25	3.00	0.8	4	4.8
60		0.42	1.40	0.5	4	4.5
65	0.71	0.00	0.0	4	4.0	

POLICE
Separations from Active Employment Before Age & Service Retirement
& Individual Pay Increase Assumptions

Sample Ages	Years of Service	Percent of Active Members Separating within the Next Year		Pay Increase Assumptions for an Individual Employee		
		Death	Other	Merit & Seniority	Base (Economy)	Increase Next Year
ALL	0		20.00%			
	1		18.00			
	2		16.00			
	3		14.00			
	4		12.00			
25	5 & Over	0.05%	11.10	3.9%	4%	7.9%
30		0.06	9.00	2.9	4	6.9
35		0.09	7.00	2.0	4	6.0
40		0.12	5.80	1.6	4	5.6
45		0.22	5.00	1.2	4	5.2
50		0.39	3.50	1.0	4	5.0
55		0.61	1.00	0.8	4	4.8

FIRE
Separations from Active Employment Before Age & Service Retirement
& Individual Pay Increase Assumptions

Sample Ages	Percent of Active Members Separating within the Next Year		Pay Increase Assumptions for an Individual Employee		
	Death	Other	Merit & Seniority	Base (Economy)	Increase Next Year
25	0.05%	6.80	3.9%	4%	7.9%
30	0.06	5.00	2.9	4	6.9
35	0.09	3.60	2.0	4	6.0
40	0.12	2.40	1.6	4	5.6
45	0.22	1.50	1.2	4	5.2
50	0.39	0.80	1.0	4	5.0
55	0.61	0.20	0.8	4	4.8

SUMMARY OF ADDITIONAL ASSUMPTIONS USED FOR 50-YEAR PROJECTIONS

The investment return rate used in the asset projections was 7.5% per year, both before and after retirement.

Future Active Employees are assumed to have characteristics (age, sex, pay rate) that are similar to the characteristics of current employees at the time they were hired. Specifics are shown on page C-4.

Future service credit is always assumed to accrue at the rate of 1 year of credit every 12 calendar months.

The forms of benefit payment assumed in the projection are shown below, based on past experience. For members with accumulated member contributions, the residual refund available upon an early death after retirement is approximated by assuming pension payments are made for at least 3 years.

Benefit Form	Percent Electing
Life Option	60%
75% Joint & Survivor	19
50% Joint & Survivor	12
10 Year Certain	9

90% of active members were assumed to be married.

Post-Retirement Benefit Increases. The projection assumes that a 7.5% annual rate of investment return is earned on the entire portfolio (including the retiree portion of the assets). Based on the projected 7.5% annual return, an annual 2.88% compound post-retirement benefit increase is supportable. Annual increases above 2.88%, up to the maximum 4% average increase specified in statute, are projected to be paid out until the exhaustion of the Reserve for Future Experience in the Benefit Reserve Fund.

Projected benefits for disability retirement are determined using probabilities of disability which were determined empirically to approximate the operation of the terminal funding method currently used to establish contributions. Probabilities of disability are shown below sample ages:

<u>Sample Ages</u>	<u>General Men</u>	<u>General Women</u>	<u>Police</u>	<u>Fire</u>
25	0.16%	0.02%	0.08%	0.07%
30	0.21	0.02	0.10	0.11
35	0.27	0.03	0.14	0.25
40	0.35	0.06	0.20	0.39
45	0.46	0.12	0.31	0.62
50	0.60	0.25	0.52	0.95

LAGERS Retainer Actuarial Fees 10 Year Comparative Statement

Valuation Date As of	Number of Valuation Groups	Annual Actuarial Fees (nearest \$1)	Consumer Price Index (1967 is 100)	AVERAGE FEE PER GROUP	
				Unadjusted Dollars	1967* Dollars
2-29-92	626	138,883	415.2	222	53
2-28-93	634	143,772	428.7	227	53
2-28-94	645	147,990	439.3	229	52
2-28-95	655	151,898	452.0	232	51
2-29-96	665	155,981	464.2	235	51
2-28-97	686	159,701	478.2	233	49
2-28-98	711	164,711	484.9	232	48
2-28-99	731	166,991	492.9	228	46
2-29-00	747	169,995	508.7	228	45
2-28-01	777	174,985	526.7	225	43

* A goal for LAGERS during the initial design activity in 1966 and 1967 was that the actuarial retainer fee be approximately \$100 annually per valuation group - - - an amount substantially less than the amount the municipality would pay if it arranged independently for an actuarial valuation of comparable quality.

October 22, 2001

Mr. William R. Schwartz
Executive Secretary
Missouri Local Government
Employees Retirement System
1913 Williams Street
Jefferson City, Missouri 65102

Dear Bill:

Please find enclosed 15 copies of the *Compiled Report of the February 28, 2001 valuations* for the participating employers of the Missouri Local Government Employees Retirement System.

Sincerely,

Mita D. Drazilov

MDD:rmg
Enclosures

CC: Ms. Melissa Benton (KPMG Peat Marwick)

MISSOURI LOCAL GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

**Compiled 33rd Annual Actuarial Valuations
As of February 28, 2001**

**50 Year Actuarial Projection
Beginning February 28, 2001**

**GABRIEL, ROEDER, SMITH & COMPANY
ACTUARIES, CONSULTANTS**